



Ref. Enquiry No.: PE/PG/SGI/E-6881/2021, Dated 16.02.2022

DUE DATE
28-Feb-2022
BY 12:00 PM

Dear Sir/ Ma'am

Subject: Open tender Enquiry for "STEAM TRAPS" for 1X660 MW WBPDCS SAGARDIGHI EXTN UNIT V Project as per Technical Specification No. PE-TS-445-100-M010 (Rev.00).

BHEL invites your offers for design, manufacture, assembly, inspection and testing at manufacturer's and / or his sub-contractors works, proper packing for transportation and delivery of **STEAM TRAPS** with mandatory spares complete with all accessories as per the requirements specified in technical specification no. **PE-TS-445-100-M010 (Rev.00)** amendment & agreements till placement of order for **STEAM TRAPS for 1X660 MW WBPDCS SAGARDIGHI EXTN UNIT V.**

Your offer shall be submitted in two parts strictly as per Clause-2.0 of the "Instructions to Bidders" of GCC Rev. 07, in sealed cover for the below mentioned equipment/system.

ITEM DESCRIPTION – STEAM TRAPS			
Sl. No.	Project	TECHNICAL SPECIFICATION NO.	Delivery completion schedule
1	1X660 MW WBPDCS SAGARDIGHI EXTN UNIT V	PE-TS-445-100-M010 (Rev.00)	As per Annexure – A to NIT

Your best quotation/offer for the above requirement, in line with tender terms and conditions, should be submitted **online via e-procurement system (NIC portal)**. It shall be the responsibility of the bidder to ensure that the tender is submitted **on or before the due date by 12:00 PM**. Part-I bids shall be opened at **04:30 PM** on the due date. Kindly open the website only in Internet Explorer browser.

Note: 1. Detailed tender documents have been uploaded on following websites: -

<https://eprocurebhel.co.in>, www.bhel.com, www.pem.bhel.com and www.eprocure.gov.in

Bidders are requested to upload their best offer on <https://eprocurebhel.co.in> only.

2. In case bidders are not interested to quote, please send us the regret by e-mail or letter.

ENQUIRY TERMS AND CONDITIONS:

- Offers should be submitted/uploaded separately in two parts **online through e-procurement system** as follows:
Part-I : TECHNO-COMMERCIAL BID Part-II : PRICE BID
For detailed instructions, please refer GCC Rev 07- Instructions to Bidders.
- Bidders shall submit their offers meeting the requirements of the following tender documents indicated in BHEL PEM GCC Rev- 07 and other Terms and Conditions included in this Enquiry Letter. Weblink of GCC Rev 07 shall be as below, **bidders may download the GCC Rev 07 from the given web link and go through the same before quoting :-**
<https://www.pem.bhel.com/Documents/GCC/GCCRev07.pdf>
- Bidders to note that following form the part of tender documents:
 - General Conditions of Contract (GCC) Rev 07 comprising of: [Instructions to Bidders and General Commercial Terms & Conditions](#)
 - Technical Specifications No. PE-TS-445-100-M010 (Rev.00)
 - Technical PQR
 - Special Conditions of Contract (SCC Rev 00) of 1X660 MW WBPDCS SAGARDIGHI EXTN UNIT V
 - Enquiry terms & conditions (NIT) a/w Annexure-A to NIT Delivery Schedule
 - BOQ cum Price Schedules.

Ashutosh Sharma/ Dy. Manager/ PG-I
PS-Project Engineering Management,
Power Project Engineering Institute,
Plot no. 25, Sector – 16A, Noida (UP) 201301, INDIA
(OFF) +91-120-4213510, (MOB.) +91 9873412410

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Bidders to note that offers shall be submitted strictly in accordance with the requirements of the above tender documents.

4. Any hidden conditions/deviations mentioned elsewhere in offer and standard pre-printed terms & conditions of the tenderers shall not be considered valid.
5. Tenders shall be submitted strictly in accordance with the requirements of the above-mentioned tender documents. Deviations (Technical as well as Commercial), if any, shall be listed out separately in Annexure-II of GCC Rev-07 along with reasons for taking such deviations in the bidding format in E-Procurement portal. Any deviations (Technical as well as Commercial) not mentioned in the Annexure-II of GCC Rev07 shall not be considered. Bidders to note all the points mentioned in "Notes" of Annexure-II of GCC Rev.07.
6. If any bidder has mentioned the term "Not Applicable" / "not required" / "not quoted" in BHEL price format, the same to be substantiated by the bidder. If such item is required to be supplied for system completion in future, same will be supplied free of cost by the successful bidder.
7. Tenderers must enclose the Quality Plan in the prescribed format, for approval. Equipment will be dispatched only after Purchaser's/Owner's inspection of the hold points specified in the approved Quality Plan and issue of Material Dispatch Clearance Certificate (MDCC).
8. Offers should be submitted separately in two parts **online through e-procurement system (NIC Portal) only**, however, all correspondence thereof, shall be addressed to the undersigned by name & designation and sent at the following address:

Mr. Ashutosh Sharma Dy. MGR, PG-I E-Mail: ashutosh.sharma@bhel.in Ph. No. +91-120-4213510; Mob: 9953038740	Mr. Ashish Kumar Gupta Manager, PG-I E-Mail: ashishkumargupta@bhel.in Ph. No. +91-120-4368761; Mob: 9873412410
M/s. Bharat Heavy Electricals Ltd., Project Engineering Management, PPEI Building, Plot No 25, Sector-16A, Noida-201301, U.P., INDIA	

9. Evaluation shall be done on Total Cost to BHEL (excluding GST) on lumpsum basis. Incomplete offer or part offer of NIT BOM/BOQ shall be summarily rejected.
10. Overall (%) variation in contract values due to changes in the scope shall be limited to +/-10%. This will prevail over the quantity variation Cl. No. 6.0 General Commercial Terms & Conditions of GCC, Rev. 07
11. "BHEL shall be finalizing this tender with price bid opening method and will not be conducting RA. Bidders to quote suitably. Bidders to note that this clause will supersede clause no 13 of 'Instruction to Bidders' of GCC Rev 07"
12. **MAKE IN INDIA Clause: -**

"For this procurement, the local content to categorize a supplier as a Class I local supplier / Class II local Supplier / Non Local supplier and purchase preference to Class-I local supplier, is as defined in Public Procurement (Preference to Make in India) Order 2017 dated 16.09.2020 issued by DPIIT. In case of subsequent orders issued by the nodal ministry, changing the definition of local content for the items of the NIT, the same shall be applicable even if issued after issue of this NIT, but before opening of Part-II bids against this NIT."

Since this package doesn't fall under clause 3 (a) of DPIIT's PP-MII order 2017, Rev dated 17.09.2020, therefore, in line with clause no 3 (b) of DPIIT's PP-MII order 2017, Rev dated 16.09.2020, "Class-I local suppliers" and "Class-II local suppliers" as defined in the order are eligible to bid.

In accordance with para 9 (a) of DPIIT's PP-MII order 2017 revision dated 16.09.2020, Class-I local suppliers" / "Class-II local suppliers" at the time of tender, bidding or solicitation shall be required to indicate percentage of

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local content and provide self-certification that the item offered meets the local content requirement for the "Class-I local supplier" / "Class-II local supplier" as the case may be. They shall also give details of the location(s) at which the local value addition is made.

Further, subject package is divisible in nature and margin of purchase preference shall be 20%.

Subject package is divisible in nature.

13. This is a conditional tender enquiry. Price Bid opening of a bidder shall be subjected to the following:
 - i) Approval of vendor by end customer i.e. (M/s WBPDC)
 - ii) Techno-Commercial evaluation by BHEL.
 - iii) Qualification of Technical PQR
 - iv) Offered item should mandatorily conform to PP-MII order provisions.
14. **Delivery Completion schedule :**
As per enclosed **Annexure-A** for delivery schedule.
15. PRICE VARIATION: Prices shall be firm till completion of contract.
16. CIF is not available for this package.
17. Bidders are requested to furnish the details as per "TECHNICAL PRE-QUALIFYING REQUIREMENTS" (enclosed with the enquiry document). Along with the tender, bidders to furnish all legible & valid documents required for Technical PQR. The same shall be properly co-relating with respective clause of PQR.
Bids of only those bidders shall be evaluated who meet the Technical pre-qualifying requirements.
18. Bidders to ensure that Third party / customer issued certificates being submitted as proof of PQR qualification should have verifiable details of document / certificate issuing authority such as name & designation of Issuing Authority and its organisation contact number and e-mail Id etc. In case the same found not available, Purchaser has right to reject such document from evaluation.
19. **Freight :** - Bidders to mandatorily quote the freight in terms of percentage of Total Ex-works price in priced Bid.
20. **For bidders (who are not registered with BHEL-PEM)** - For registration in BHEL PEM- Online registration portal is operational, Non-registered Vendors who wish to apply for registration in BHEL-PEM can apply through Online Registration Portal available at www.pem.bhel.com - vendor section - Online Supplier Registration. All credentials and/or documents duly signed and stamped related to registration can be uploaded on the website and submit the application for registration. However, registration of suppliers is not mandatory in case of open tender.
21. Bidders to note that "This This item /package/system falls under the list of items defined in para 3 of ministry of finance guideline date 20.09.16 (procurement of items related to public safety, health, critical security operations and Equipments etc.) & hence criteria of prior experience /turnover shall be same for all bidders including start up /MSME".
22. Bidders to,
 - ensure compliance to Ministry of Power (MoP) Order No. 25-11/6/2018-PG dt. 02/07/2020 & Order No. 11/05/2018-Coord. dt. 23/07/2020, if applicable.
 - ensure compliance of Ministry of Finance (MoF) Order (Public Procurement No. 1 & 2) F. No. 6/18/2019/PPD dt. 23/07/2020.
 - to submit "Model Certificate for Tenders" as per Annexure-III of Ministry of Finance (MoF) Order (Public Procurement No. 1 & 2) F. No. 6/18/2019/PPD dt. 23/07/2020.

Note: Subsequent orders/circulars to be checked and to be complied.

An undertaking regarding Model Clauses (as applicable from Annexure-III) shall be furnished along with bid documents in attached Annexure-III".

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23. Due to COVID-19 pandemic condition prevailing in the country, BHEL/PEM may go for Remote Inspection of Offered items, if required. Vendors are requested to be equipped with the facilities/gadgets as indicated in the guidelines available at : <https://www.pem.bhel.com/Documents/VendorSection/Vendor/Guidelines.pdf>
24. The Bidder declares that they will not enter into any illegal or undisclosed agreement or understanding, whether formal or informal with other Bidder(s). This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.
- In case, the bidder is found having indulged in above activities, suitable action shall be taken by BHEL as per extant policies/guidelines.
25. "In course of evaluation, if more than one bidder happens to occupy L-1 status, effective L-1 will be decided by soliciting discounts from the respective bidders. In case more than one bidder happens to occupy L-1 status even after soliciting discounts, the L1 bidder shall be decided by a toss / draw of lots, in the presence of respective bidder(s) or their representative(s). Ranking will be done accordingly. BHEL's decision in such situation shall be final and binding."
26. Bidder agrees to submit performance security required for execution of the contract within the time period mentioned. In case of delay in submission of performance security, enhanced performance security which would include interest (SBI rate + 6%) for the delayed period, shall be submitted by the bidder. Further, if performance security is not submitted till such time the first bill becomes due, the amount of performance security due shall be recovered as per terms defined in NIT /contract, from the bills along with due interest.
27. In case of joint bidding, bidders to furnish scope matrix which should be clearly defined between them along with the offer for the complete scope as per NIT.
28. Bidders to note that GeM seller ID shall be mandatory before placement of order against this tender.
29. Bidders have to comply the Instructions to Packing List (Annexure-II).
30. The Evaluation Currency for this tender shall be INR.
31. If any bidder uploads price bid in the unpriced section (techno-commercial attachment page) of the tender in e-procurement, in that case bidder(s) shall only be responsible for such mistake and any consequences thereof. Hence all bidders are requested to be more careful at the time of uploading the Unpriced and Price Bid for Part-I and Part-II respectively to avoid mismatch.
32. All corrigenda, addenda, amendments, time extensions, clarifications etc. to the tender will be hosted on BHEL websites only (www.pem.bhel.com., www.bhel.com & [https:// eprocurebhel.co.in](https://eprocurebhel.co.in)) under subject tender reference. Bidders are requested to visit our websites from time to time to keep themselves updated. Bidders may go through the Sellers' manual & Help documents provided on E-Procurement Portal website & obtain required Digital Signature Certificate for participating in the subject Tender. For Bidders' convenience, the Helpdesk Nos. of E-Procurement (NIC) Portal is available at website i.e. <https://eprocurebhel.co.in>:
33. All terms and conditions shall be as per NIT, SCC of project and GCC Rev. 07.

In the event of any contradiction, the terms and conditions mentioned, the order of preference shall be as mentioned in Cl. No. 36 of GCTC of GCC Rev. 07.

34. Detailed offers are to be uploaded including the following along with the Price schedule as per BHEL format enclosed with NIT: -
- Acceptance of BHEL-PEM GCC Rev-07

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- Acceptance of Special Conditions of Contract (SCC Rev 00) for the project.
- Technical & Commercial Deviations, if any along with Cost of withdrawal in bidding form
- Along with your offer, please submit a copy of this letter duly signed & stamped on each page as token of acceptance of terms & instructions conveyed.
- Un-Priced price format duly filled in 'Quoted' or 'Q' in each column/row in bidding form
- Filled Format of Certification reg. Local content (annexure -I)
- Model Certificate in line with clause no. 20 of this NIT (Annexure-III).
- Relevant documents to meet the Technical PQR

All the above Tender Documents shall automatically become a part of the Order/Contract after its finalisation.

35. In case you are not making an offer against this enquiry, you are requested to send a regret letter so as to reach us on or before the due date.

Thanking You

Yours faithfully,
For and on behalf of BHEL-PEM

Ashutosh Sharma

(Dy. Manager/PG-I/BHEL-PEM)

Enclosures:

1. Enquiry Letter (NIT) a/w Annexure-A to NIT Delivery Schedule.
2. Technical Specification No. PE-TS-445-100-M010 (Rev.00)
3. Technical PQR
4. SCC Rev. 00
5. BOQ cum Price schedules (Main Supply, Mandatory Spares)
6. Cost of Withdrawal Deviation Sheet
7. Format of Certification reg. Local content (annexure -I)
8. Format of Certification reg. Land Border (annexure -III)
9. Instructions to Packing List (Annexure-II).
10. Guideline for Remote Inspection



PROJECT : 1 X 660 MW SAGARDIGHI TPS, PHASE-III

PACKAGE : STEAM TRAPS- MAIN SUPPLY

ENQUIRY No. PE/PG/SGI/E-6881/2021, Dated 16.02.2022

NAME OF THE BIDDER :

SL. NO.	TAG Nos.	TYPE	CONNECTING PIPE SIZE (NB)	PIPE THICKNESS (MM)	SERVICE DESCRIPTION	SERVICE	DESIGN PRESURE (KG/CM ² (g)	DESIGN TEMP(deg C)	OPERATING PRESSURE AT INLET OF TRAP (Kg/cm ²)	OPERATING PRESSURE AT D/S OF TRAP (Kg/cm ²)	MAX. CONDESATE RATE (KG/HR)	FACTOR OF SAFETY	BODY	MATERIAL BODY INTERNALS	END CONN	IBR REQUIRED	UNIT	TOTAL QUANTITY (MAIN)	HSN/ SAC CODE	UNIT PRICE (EX-WORKS) (Rs.)-DULY PACKED	TOTAL PRICE (EX-WORKS) (Rs.)-DULY PACKED	FREIGHT CHARGES@ ... % of TOTAL PRICE (EX-WORKS)	FREIGHT CHARGES (Rs.)	TYPE OF GST (IGST/CGST/SGST)	RATE OF GST (%)	GST AMOUNT ON (TOTAL EX-WORKS + FREIGHT) (Rs.)	TOTAL F.O.R SITE PRICE (Rs.)							
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28							
1	ASV-107, ASV-113, ASV-118, ASV-123, ASV-128, ASV-133, ASV-138, ASV-143, ASV-181, ASV-186, CRHV-151, EXV-107, EXV-113, EXV-130, EXV-140 CONTINGENCY 6 Nos	THERMODYNAMIC STEAM TRAP-LP	33.4	4.55	POWER CYCLE	INTERMITTENT	20	375	16	0.1 (VAC)	10	NOT LESS THAN 2	CS	SS	SW	YES	NOS.	21	84818090															
2	CRHV-121, CONTINGENCY 01 NO.	THERMODYNAMIC STEAM TRAP-HP	33.4	4.55	POWER CYCLE	INTERMITTENT	74.2	380	65.44	0.1 (VAC)	10		CS/SS/EQUIVALENT OR HIGHER	SS	SW	YES	NOS.	2	84818090															
3	DRV-67	INVERTED BUCKET TRAP	88.9	5.49	DRAIN LINE	CONTINUOUS	3.5/ VAC	115	1.03 (VAC)	0.1 (VAC)	300		CS	SS	BW	NO	NOS.	1	84818090															
4	DRV-66	EXTERNAL Y-TYPE STRAINER	88.9	5.49	DRAIN LINE	CONTINUOUS	3.5/ VAC	115	1.03 (VAC)	0.1 (VAC)	300		CS	SS	BW	NO	NOS.	1	84818090															
GRAND TOTAL (MAIN SUPPLY)																		25																

NOTES:

- Bidder to offer steam trap and strainer meeting the parameters mentioned in the above Datasheet-A.
- For detailed material of construction refer DataSheet-A.
- For item no. 1 and 2, Bidder to supply Suitable matching pieces to match with connecting pipe size. For item no. 3 and 4, strainer inlet & trap outlet shall be matched with connecting pipe size by bidder. Strainer outlet and trap inlet shall be matched through expander/reducer. Bidder to consider all reducer/expander, as required, in their scope.
- Painting: Refer clause 7 of Section-I of technical specification .
- Socket Welding (SW) will be as per ASME-B16.11; Butt welding (BW) will be as per ASME B16.25.
- CS:Carbon Steel, SS: Stainless Steel CCS-Cast carbon steel, VAC: Vacuum, ATM: Atmospheric.
- Equivalent/higher material is acceptable.
- Mandatory spares for Steam traps and Y type strainers - required to complete one full assembly/complete set.



PROJECT : 1 X 660 MW SAGARDIGHI TPS, PHASE-III

PACKAGE : STEAM TRAPS- MANDATORY SPARES

ENQUIRY No. PE/PG/SGI/E-6881/2021, Dated 16.02.2022

NAME OF THE BIDDER :

SL. NO.	TAG Nos.	TYPE	CONNECTING PIPE SIZE (NB)	PIPE THICKNESS (MM)	SERVICE DESCRIPTION	SERVICE	DESIGN PRESURE (KG/CM2(G))	DESIGN TEMP(deg C)	OPERATING PRESSURE AT INLET OF TRAP (Kg/cm2)	OPERATING PRESSURE AT D/S OF TRAP (Kg/cm2)	MAX. CONDESATE RATE (KG/HR)	FACTOR OF SAFETY	BODY	MATERIAL BODY INTERNALS	END CONN	IBR REQUIRED	UNIT	TOTAL QUANTITY (MANDATORY SPARES)	HSN/ SAC CODE	UNIT PRICE (EX-WORKS) (Rs.)-DULY PACKED	TOTAL PRICE (EX-WORKS) (Rs.)-DULY PACKED	FREIGHT CHARGES@. . % of TOTAL PRICE (EX-WORKS)	FREIGHT CHARGES (Rs.)	TYPE OF GST (IGST/CGST/SGST)	RATE OF GST (%)	GST AMOUNT ON (TOTAL EX-WORKS + FREIGHT) (Rs.)	TOTAL F.O.R SITE PRICE (Rs.)
1	ASV-107, ASV-113, ASV-118, ASV-123, ASV-128, ASV-133, ASV-138, ASV-143, ASV-181, ASV-186, CRHV-151, EXV-107, EXV-113, EXV-130, EXV-140 CONTINGENCY 6 Nos	THERMODYNAMIC STEAM TRAP-LP	33.4	4.55	POWER CYCLE	INTERMIT TENT	20	375	16	0.1 (VAC)	10	NOT LESS THAN 2	CS	SS	SW	YES	NOS.	3	84818090								
2	CRHV-121, CONTINGENCY 01 NO.	THERMODYNAMIC STEAM TRAP-HP	33.4	4.55	POWER CYCLE	INTERMIT TENT	74.2	380	65.44	0.1 (VAC)	10		CS/SS/ EQUIVA LENT OR HIGHER	SS	SW	YES	NOS.	1	84818090								
3	DRV-67	INVERTED BUCKET TRAP	88.9	5.49	DRAIN LINE	CONTINU OUS	3.5/ VAC	115	1.03 (VAC)	0.1 (VAC)	300		CS	SS	BW	NO	NOS.	1	84818090								
4	DRV-66	EXTERNAL Y-TYPE STRAINER	88.9	5.49	DRAIN LINE	CONTINU OUS	3.5/ VAC	115	1.03 (VAC)	0.1 (VAC)	300		CS	SS	BW	NO	NOS.	1	84818090								
GRAND TOTAL (MANDATORY SPARES)																		6									

NOTES:

- Bidder to offer steam trap and strainer meeting the parameters mentioned in the above Datasheet-A.
- For detailed material of construction refer DataSheet-A.
- For item no. 1 and 2, Bidder to supply Suitable matching pieces to match with connecting pipe size. For item no. 3 and 4, strainer inlet & trap outlet shall be matched with connecting pipe size by bidder. Strainer outlet and trap inlet shall be matched through expander/reducer. Bidder to consider all reducer/expander, as required, in their scope.
- Painting: Refer clause 7 of Section-I of technical specification .
- Socket Welding (SW) will be as per ASME-B16.11; Butt welding (BW) will be as per ASME B16.25.
- CS:Carbon Steel, SS: Stainless Steel CCS-Cast carbon steel, VAC: Vacuum, ATM: Atmospheric.
- Equivalent/higher material is acceptable.
- Mandatory spares for Steam traps and Y type strainers - required to complete one full assembly/complete set.

**Annexure-A to Enquiry (NIT) Delivery Schedule for STEAM TRAPS
1X660 MW WBPDCS SAGARDIGHI EXTN UNIT-V**

Enquiry No. :- PE/PG/SGI/E-6881/2021, Dated 16.02.2022

Sl. No.	Package name	Deptt	BHEL Drawing No	Drawing Title	Primary/ Secondary	Drg Sch for Vendors	Delivery Terms for Supply Portion
1	STEAM TRAPS	MPL	PE-QP-445-142-M015	QP FOR INVERTED BUCKET STEAM TRAP	Primary	R-0 within 14 days from PO & subsequent revisions incorporating all the BHEL comments within 10 days of comments received from BHEL. BHEL shall furnish comments / approval on each submission within 18 days from receipt.	Within Four (04) months, from date of CAT-1 approval of Primary drawing/documents or BHEL manufacturing clearance whichever is later, subjected to drawing/document submission/re-submission schedule as stipulated, in case of any delay in submission/re-submission of Primary drawing/ documents, then same shall be reduced from the given delivery period. Delay in BHEL's comments/ approval beyond 18 days shall also be considered for delay analysis. 1. Vendor to start manufacturing activities only after obtaining specific manufacturing clearance from BHEL Purchase group. 2. In case BHEL manufacturing clearance date is later than the date of Cat-1 approval of Primary drawing/documents, then the contractual delivery period will be calculated by setting off the time gap between Cat-1 approval date of Primary drawing/documents and the manufacturing clearance date, from any delay by vendor in submission/re-submission of Primary drawing/documents.
			PE-V0-445-100-M031	GA DRG FOR THERMODYNAMIC TYPE STEAM TRAPS WITH STRAINER	Primary		
			PE-V0-445-100-M032	GA DRG FOR INVERTED BUCKET STEAM TRAPS WITH STRAINER	Primary		
			PE-V0-445-100-M033	GA DRG FOR BALL FLOAT TYPE STEAM TRAPS WITH STRAINER	Primary		
			PE-QP-445-142-M022	QP FOR BALL FLOAT TYPE STEAM TRAP	Primary		
			PE-QP-445-142-M003	QP FOR ASSOCIATED STRAINER FOR STEAM TRAP	Primary		
			PE-QP-445-142-M002	QP FOR THERMODYNAMIC TYPE STEAM TRAP	Primary		

Notes:

- The end period specified is for completion of deliveries. Deliveries to start progressively so as to meet the completion schedule.
- The delivery conditions specified are for contractual LD purposes, however BHEL may ask for early deliveries without any compensation thereof.
- Non-applicable drawings shall be decided during bid evaluation of the package.
- Wherever schedule of drawings/documents submission/ re-submission is stipulated in the Technical Specifications, same shall be superseded by delivery specified in NIT.

COST OF WITHDRAWAL DEVIATION SHEET**SCHEDULE OF TECHNICAL AND COMMERCIAL DEVIATION****PROJECT:- 1x660 MW WBPDC SAGARDIGHI EXTN UNTI V****PACKAGE:- STEAM TRAPS****TENDER REF NO - PE/PG/SGI/E-6881/2021, Dated 16.02.2022****NAME OF VENDOR:-**

SL NO	VOULME/ SECTION	PAGE NO.	CLAUSE NO.	TECHNICAL SPECIFICATIO N/ TENDER DOCUMENT	COMPLETE DESCRIPTION OF DEVIATION	COST OF WITHDRAWL OF DEVIATION	REFERENCE OF PRICE SCHEDULE ON WHICH COST OF WITHDRAWL OF DEVIATION IS APPLICABLE	NATURE OF COST OF WITHDRAWL OF DEVIATION (POSITIVE/ NEGATIVE)	REASON FOR QUOTING DEVIATION
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TECHNICAL DEVIATIONS

COMMERCIAL DEVIATIONS

PARTICULARS OF BIDDERS/ AUTHORISED REPRESENTATIVE

NAME	DESIGNATIONS	SIGN & DATE
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NOTES:

1. Cost of withdrawl of deviation will be applicable on the basic price (i.e. excluding taxes, duties & freight) only.
2. All the bidders have to list out all their Technical & Commercial Deviations (if any) in detail in the above format.
3. Any deviation not mentioned above and shown separately or found hidden in offer, will not be taken cognizance of.
4. Bidder shall submit duly filled unpriced copy of above format indicating "quoted" in "cost of withdrawl of deviation" column of the schedule above along with their Techno-commercial offer,
5. Bidder shall furnish price copy of above format along with price bid.
6. The final decision of acceptance/ rejection of the deviations quoted by the bidder shall be at discretion of the Purchaser.
7. Bidders to note that any deviation (technical/commercial) not listed in above and asked after Part-I opening shall not be considered.
8. For deviations w.r.t. Credit Period, Liquidated damages, Firm prices if a bidder chooses not to give any cost of withdrawl of deviation loading as per Annexure-VII, will apply. For any other
9. Any deviation mentioned in priced copy of this format, but not mentioned in the un-priced copy, shall not be considered.
10. All techno-commercial terms and conditions of NIT shall be deemed to have been accepted by the bidder, other than those listed in unpriced copy of this format.
11. Cost of withdrawl is to be given seperately for each deviation. In no event bidder should club cost of withdrawl of more than one deviation else cost of withdrawl of such deviations which have
12. In case nature of cost of withdrawl (positive/negative) is not specified it shall be assumed as positive.
13. In case of descrepancy in the nature of impact (positive/ negative), positive will be considered for evaluation and negative for ordering.

ANNEXURE I
1 X 660 MW WBPDCS SAGARDIGHI EXTN UNIT V
STEAM TRAPS
ENQUIRY NO. – PE/PG/SGI/E-6881/2021, Dated 16.02.2022

Letter head of Company

Ref.....

Date.....

To,
Bharat Heavy Electricals Limited
PEM, PPEI Building, Plot No 25,
Sector -16A, Noida (U.P)-201301

Subject: - Certification regarding local content

Dear Sir,

We hereby certify that items offered by us of **STEAM TRAPS** for **1 X 660 MW WBPDCS SAGARDIGHI EXTN UNIT V** meets the requirement of minimum local content in line with clause no. -- of NIT and the Public Procurement (Preference to Make in India), Order 2017 dated-15.06.2017, 28.05.2018, 29.05.2019, 04.06.2020 & 16.09.2020. The Percentage (%) of Local content is%.

We further confirm that details of location at which the local value addition is made will be our registered works at(address of the works).

Yours very truly

..... (authorized signatory of company)

..... (firm name)

authorized signatory
of company

1 X 660 MW WBPDCS SAGARDIGHI EXTN UNIT V
STEAM TRAPS
ENQUIRY NO.-PE/PG/SOI/E-6881/2021, Dated 16.02.2022

ANNEXURE -II (INSTRUCTIONS TO PACKING LIST)

For faster verification of bills, successful bidder to submit detailed Bill of Material (BOM) at the time of drawings/ documents submission after placement of PO. Each item of the BOM to be uniquely identified with item code no. or item Sl. No. Supplier to ensure that all items which will find separate mention in the packing list are covered in this detailed BOM.

Supplier to also give the following undertaking in the BOM:

“The BOM provided herewith completes the scope (in content and intent) of material supply under PO No. Dated Any additional material which may become necessary for the intended application of the supplied items/package will be supplied free of cost in most reasonable time.

Packing List must indicate:

- a) Packing size
- b) Gross weight and net weight of each package
- c) Contents of the package with cross reference to BOM item code no. / Sl. No.
- d) Quantity of each items separately.

The packing list must cover all the BOM items.

Supplier to give following undertaking in the packing list:

The Packing list provided herewith is as per BOM approved under PO No. ----

ANNEXURE III
1 X 660 MW WBPDC SAGARDIGHI EXTN UNIT V
STEAM TRAPS
ENQUIRY NO. – PE/PG/SGI/E-6881/2021, Dated 16.02.2022

Letter head of Company

Ref.....

Date.....

To,
Bharat Heavy Electricals Limited
PEM, PPEI Building, Plot No 25,
Sector -16A, Noida (U.P)-201301

Subject: - Certification regarding Land Border

Dear Sir,

I have read the clause regarding restrictions of procurement from a bidder of a country which shares a land border with India. I hereby certify that M/s (Organization name) is not from such a country and is eligible to be considered.

Note :- Bidder is requested to furnish the above undertaking on company letterhead from the highest competent authority at your end (i.e Owner, partner, CMD, Director, company secretariat etc.).

Yours very truly

..... (authorized signatory of company)

..... (firm name)

authorized signatory
of company

PEM/PG-I BHEL, NOIDA
SPECIAL CONDITIONS OF CONTRACT (REV.00) DATED 28-04-2021
1X 660 MW SAGARDIGHI TPP EXTENSION UNIT 5



These Conditions shall be read and construed along with General Condition of Contract enclosed along with the tender enquiry. In case of any conflict or inconsistency, the condition given in special condition of contract shall prevail over the general condition of the contract and its corrigenda, if any.

- 1.0 **Project Name** : Sagardighi Thermal Power Extension Project Phase- III, Unit 5 [1X660MW, Supercritical]
- 2.0 **Customer** : West Bengal Power Development Corporation Limited.
- 3.0 **Consignee-Ship to Address {to be mentioned in LR/RR, consignment note}** : Construction Manager-BHEL Site office Unit-V
Sagardighi Thermal Power Project
P.O. Manigram,
District - Murshidabad, PIN:742237, West Bengal, India
- 4.0 **Consignee/Buyer's Name (Bill To) To be mentioned in Supplier's Invoice** : For Supply Packages: (Purchase order by BHEL-PEM):
Bharat Heavy Electricals Limited
Power Sector – Project Engineering Management
PPEI Building, Plot No.25, Sector-16A,
Noida-201301 (Uttar Pradesh)
GSTIN No. – 09AAACB4146P2ZC
- For Turnkey Packages: (LOA by BHEL-PEM and PO by BHEL-PSER, Sagardighi site):
Construction manager, BHEL Site office,
1X660 MW WBPDCS SAGARDIGHI TPP EXTENSION UNIT 5
P.O. Manigram, District - Murshidabad, PIN:742237, West Bengal, India
BHEL PSER GSTIN No.- 19AAACB4146P1ZC
- 5.0 **BHEL Site Office Address** : Construction Manager
BHEL site office Unit-V
Sagardighi Thermal Power Project
P.O. Manigram, District - Murshidabad, PIN:742237, West Bengal, India
- 6.0 **Customer Address** : Deputy General Manager (I/C projects)
Sagardighi Thermal Power Project
P.O. Manigram,
District - Murshidabad, PIN:742237, West Bengal, India
- 7.0 **Mode of Dispatch** : By Rail/Road on Door Delivery and freight Pre-Paid Basis.
Nearest Railway Station :- Manigram
- 8.0 **Road Permit/Way Bill Required** : Yes. Supplier to generate the e-waybill at their end and furnish the scanned copy of e-waybill along with dispatch document to BHEL immediately on dispatch. In case of default, supplier shall be held responsible.
- 9.0 **Project Consultant** : DCPL
- 10.0 **Material Inspection Procedure** : All equipment's/items under inspection category shall be sub categorized as follows:
- CAT-A: QAP will be submitted to WBPDCS / DCPL for approval. Inspection activities will be jointly witnessed by BHEL QC / TPIA and WBPDCS/TPIA of WBPDCS as per approved QAP witness/hold points.
- CAT-B: QAP will be submitted to WBPDCS / DCPL for approval. Inspection shall be carried out by BHEL QC/TPIA only.
- CAT-C: These are non QAP items and shall be accepted by BHEL QC/ TPIA on the basis of review of manufacturer's test certificate / certificate of compliance (COC) / internal

PEM/PG-I BHEL, NOIDA
SPECIAL CONDITIONS OF CONTRACT (REV.00) DATED 07-01-2021
1X 660 MW SAGARDIGHI TPP EXTENSION UNIT 5



inspection report/ guarantee certificate etc. issued by the equipment manufacturer itself confirming all the technical and contractual requirements. For these items, submission of QAP and approval by WBPDCCL are not envisaged. However, quality of these items must be ensured through respective BHEL QC.

Vendor to give five (05) days advance notice for stage inspection and ten (10) days for final inspection.

Details for Inspection procedure involving the TPIA shall be intimated later by BHEL/ WBPDCCL.

- 11.0 **Clearance for Dispatch of materials** : MDCC will be issued by BHEL/WBPDCCL.
- 12.0 **Prior Dispatch intimation to BHEL Site Office and Underwriters** : YES
NOTE :- One set consisting dispatch documents indicating the items dispatched (with their gross and net weights) and after informing the underwriters about the value of consignment and dispatch details to be sent to following
a) BHEL Site Office
b) BHEL- PEM, PPEI - Noida(U.P)
c) Insurance Co.
It is Vendor's responsibility to ensure availability of trucks well in advance where consignment will require more number of trucks to be deployed for dispatch. No concession for non-availability of trucks, after having given dispatch clearance shall be admissible.
- 13.0 **Transit Insurance** : By BHEL (vendor to intimate the underwriters quoting the insurance policy no. as below)
- 14.0 **Insurance Policy No. For intimation to Underwriters (Contact Person)** : Policy details and number shall be informed later
- 15.0 **a. Customer GST No.** : 19AABCT3027C1ZQ
b. BHEL-PEM GST No. : 09AAACB4146P2ZC
c. BHEL PSER GST No. : 19AAACB4146P1ZC
- 16.0 **Unloading at site** : BY BHEL site for supply packages.
(The supplier shall give LR wise Gross Wt. Of the consignment for the purpose of handling the consignment by BHEL site loading/unloading Contractor.)
By Vendor for turnkey packages (Scope consists of supply and Erection & Commissioning).

NOTE: - Please note that unloading of materials at site shall take at least 3-4 days. As such, transporters to be advised suitably before dispatch of materials in this regard. Also, no claim on a/c of delay in unloading shall be entertained.
- 17.0 **Storage and handling at site** : By BHEL site for supply packages

By Vendor for Turnkey packages* (Scope consists of supply and Erection & Commissioning).

PEM/PG-I BHEL, NOIDA
SPECIAL CONDITIONS OF CONTRACT (REV.00) DATED 07-01-2021
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*Any shortages or damages during unloading and handling at site, including at the time of erection and commissioning, shall be made good by the Seller/ Contractor at his risk and cost, to meet the project schedule. In case of faults/ discrepancies in any material, component, sub-assembly, assembly, etc., the same shall be supplied/ replenished free of cost to enable the equipment to be put to service.

- 18.0 **Movement of Material within Site** : By BHEL/BHEL appointed agency for supply packages
By Vendor for Turnkey packages Scope consists of supply and Erection & Commissioning).
No movement of loose materials shall be allowed. Items are to be properly packed to ensure proper and safe transportation & storage at site.
- 19.0 **Paying Authority** : For packages where PEM will issue the Purchase Order: BHEL PEM will be the paying authority.
For packages where PEM will issue only the LOA and Purchase Order shall be issued by PSER: BHEL Sagardighi Site /PSER will be the paying Authority.
- 20.0 **Documents Required (for supply + freight payment)** : Original + 2 Copies of the following documents: -
1. Invoice checklist duly signed and stamped
2. Invoice
3. Receipted LR (signed & stamped)/ confirmation from site regarding receipt of packages/ Boxes original/ copy)
4. Packing List – Clearly showing number of packages, gross weight net weight.
5. Copy of BHEL MDCC
6. Guarantee Certificates as per GCC.
7. Copy of insurance Intimation.
8. PVC Calculation, and copy of all applicable indices, if PVC applicable as per NIT
9. Transporters document indicating the freight amount
10. Document as proof of Declaration by supplier that GST payment has been made on GST portal to be submitted for GST claim.
11. For claiming PVC if applicable as per NIT, invoice to be submitted on PO unit rates and PVC to be claimed as separate debit/credit note. The debit/ credit note to be submitted along with the main invoice.
- 21.0 **Documents Required (for MRC payment)** Original + 2 Copies of the following documents:-
a. Invoice
b. Copy of MRC
c. Proof of submission of final documents (6 sets)
d. O&M Manuals (2CD's + 15 Hardcopies)
NOTE:-
1. Customer or his representative will be involved for inspection as per approved Quality Plan.
2. MDCC will be issued by BHEL in line with approved BBU.
3. The supplier during inspection of Main supplies & Mandatory Spares by BHEL/BHEL TPIA, WBPDC/ WBPDC-Nominee shall obtain separate MDCC for Main Supplies & Separate MDCC for Mandatory Spares in line with the approved Billing Break Up.
4. It is deemed that copy of complete set of dispatch documents along with necessary TCs will be submitted to BHEL on the date of dispatch.
- 22.0 **Material Certificate(MRC)** : Responsibility to obtain MRC from customer at site
a) For Supply Packages:- For supply packages BHEL- PEM will arrange MRC from BHEL Site. However supplier/contractor shall provide support for verification of material at site, if required.
b) For Turnkey Packages:- By Vendor, where Supply/ Erection and commissioning is under Vendor's scope.

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- 23.0 Dispatch markings** : Each box shall be marked with Capital Letters in "Red" indicating : Main Supply OR Commissioning spare OR Mandatory Spare for 1X 660 MW SAGARDIGHI TPP EXTENSION UNIT 5, P.O. Manigram, District - Murshidabad, PIN:742237, West Bengal, India Each package/Drum delivered under the Contract shall be marked by Supplier as per details listed below and such marking must be distinct and in English Language (all previous irrelevant markings being carefully obliterated) for purposes of identification. Each and every box(package) shall be marked with following:-
- 1) Name and address of the consignee.
 - 2) Project Reference.
 - 3) Name of Supplier
 - 4) P.O. reference no. along with package name.
 - 5) Packing No. (1/10, 2/10, 3/10 when there are 10 packages for one consignment)
 - 6) The Gross weight and net weight of the package.
- Besides above necessary, packing shall bear a special marking "TOP", "BOTTOM", "DO NOT TURN OVER", "DEEP DRY", "HANDLE WITH CARE", etc.
- IMPORTANT**
- Two copies of respective standard manufacturer's erection instruction /operation manual shall be provided for immediate reference by BHEL site.

The Copy of complete Packing list for the consignment must be put inside the Box/Boxes.

12 copies of supplier's Erection/ Instruction manuals to be given to the BHEL, PEM, PPEI-Noida and 3 copies to BHEL, PSER, Sagardighi site within 30 days of dispatch for handing over to Customer/BHEL site.

Items like pumps, Valves, Hoists, Cranes, etc. shall essentially have O&M Manuals and E&C guidelines duly enclosed in the packing box.

- 24.0 Commissioning Spares** : The commissioning spares shall be properly packed separately in separate box and each spare shall be properly tagged giving details i.e. dispatch (to match the description given in the packing slip) to facilitate their proper identification. One Copy of Packing list must be put inside the Box.

- 25.0 Mandatory Spares** : Supplies of spares will be separate from main supply and separate manufacturing clearance shall be given for mandatory spares. The Mandatory spares shall be properly packed separately in separate boxes & boxes should be painted in red indicating Mandatory Spares in bold letters and each spare shall be properly tagged giving details i.e. item number of the equipment in line with the WBPDC approved BBU for Mandatory spares & Number per item (to match the description given in the packing slip) to facilitate their proper identification by ultimate customer M/s WBPDC. One Copy of Packing List must be put inside the BOX along with Manufacturing drawing no. reference, Catalogue reference etc.

Note :- MDCC for mandatory Spares shall be issued only after receipt of detailed list of mandatory spares & photographs before final packing clearly showing mandatory spares with due tagging as per packing list (to be sent over mail/CD). Separate dispatch clearance will be issued for the mandatory spares in line with availability of customer's stores at site.

- 26.0 Statutory Clearance and License (For turnkey packages)** : Bidder has to arrange and obtain all statutory clearances and required licenses at their own cost without any financial implication on BHEL.

- 27.0 Health, Safety and Environment (HSE) (For turnkey packages)** : The bidder will comply with HSE (Health, Safety & Environment) requirements of BHEL and follow all applicable Operational Control Procedures (OCPs) within quoted rate/ price.
Refer Document Number: HSEP:14-SGD Rev.: 02, DATE: 01.09.2020. Refer Document

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Title: Health, Safety and Environment Plan for Site Operation by Subcontractors for Sagardighi.

28.0 Responsibilities with regard to employment of Labour etc. (For turnkey packages)

: Recruitment of Local Labour:

Local labours shall be engaged for unskilled work. Preference may also be given for appointment of local people in semiskilled and skilled categories, if such suitable persons are available.

Labour Laws and Local Regulations:

The Contractor shall abide by the prevailing labour laws and shall have to obtain labour license from the appropriate authority as per the law at his cost and shall indemnify the Purchaser about his financial and other obligations arising out of labours/workers employed by him. On obtaining the labour license, the Contractor at appropriate time shall submit certified photocopy of the same to the Purchaser. The Contractor and its sub-contractor (s) shall possess valid PF & ESI Code.

Wages and Working Hours:

The Contractor shall pay rates of Wages and observe hours and conditions of labour not less favourable than those established for the trade or industry in the district where the work is carried out but not less than the applicable minimum wages or by machinery of negotiation or arbitration to which the parties are organizations of employers and trade union's representatives respectively of substantial proportions of the employers and workers engaged in the trade or industry in the district. In the absence of any rates of Wages, hours or conditions of labour so established the Contractor shall pay rates of wages and observe hours and conditions of labour which are not less favorable than the general levels of wages and hours and conditions observed by other contractor whose general circumstances in the trade or industry in which he is engaged are similar.

Contractor to furnish return of labour employed:

The Contractor shall, if required by the Engineer, deliver to the Engineer or to his office a return in such form and at such intervals as the Engineer may prescribe showing in detail category-wise number of classes of labour from time to time employed by the Contractor on the Site and such information respecting construction machinery as the Engineer may require.

The Contractor shall make his own arrangements for the engagement of all labour and provide on the Site in so far as the Contract otherwise provides, for the transport, housing, feeding and payment thereof.

The Contractor shall, so far as is reasonably practical, having regard to local conditions, provide on the Site, to the satisfaction of the Engineer an adequate supply of drinking and other water for the use of his staff and labour.

Other Requirements:

- a) The Contractor shall not, otherwise than in accordance with the Statutes, Ordinances and Government Regulation or Orders for the time being in force, import, sell, give, barter or otherwise dispose of any alcoholic liquor, or drugs, or permit or suffer any such importation, sale, gift, barter or disposal by his sub-contractor(s), agents of employees.
- b) The Contractor shall not give, barter or otherwise dispose of to any person or persons any arms or ammunition of any kind or permit the same as aforesaid.
- c) The Contractor shall in all dealings with labour in his employment have a due regard to all recognized festivals, days of rest and religious or other customs.

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- d) In the event of any outbreak of illness of an epidemic nature, the Contractor shall comply with and carry out such regulations, orders and requirements as may be made by the Government, or the local municipal or sanitary authorities for the purpose of dealing with and overcoming the same.
- e) The Contractor shall at all times take all reasonable precautions to prevent any unlawful riotous or disorderly conduct by or amongst his employees and for the preservation of peace and protection of persons and property in the neighborhood of the Site against the same.
- f) The Contractor shall be responsible for observance by his sub-contractor(s) of the foregoing provisions.

Contractor shall deploy only qualified and experienced engineers/ supervisors. They shall have professional approach in executing the work.

The contractor's supervisory staff shall execute the work in the most professional manner in the stipulated time. Accuracy of work and aesthetic finish are essential part of this contract. They shall be responsible to ensure that the assembly and workmanship conform to dimensions and tolerances given in the drawings/instructions given by BHEL engineer from time to time.

The supervisory staff employed by the contractor shall ensure proper outturn of work and discipline on the part of the labour put on the job by the contractor. Also in general they should see that the works are carried out in a safe and proper manner and in coordination with other labour and staff employed directly by BHEL or other contractors of BHEL or BHEL 's client.

If at any time, it is found that the contractor is not in a position to deploy the required engineers/supervisors/workmen due to any reason, BHEL shall have the option to make alternate arrangements at the contractor's risk and cost.

29.0 Type of Project

Project Import Route (Non Mega)

30.0 Taxes and duties

- :
- i) Concessional Custom duty in line with the Essentiality certificate issued by customer shall be applicable for packages for which CIF content is available as per NIT.
 - ii) GST- CGST/SGST/IGST: as per GCC Rev 07 or further revisions of BHEL PEM GCC as applicable for the specific Tender enquiry.
 - iii) Vendor has to comply the BOCW norms as per details of activities noted vide relevant Annexure of NIT.

Information as per Annexure-1 shall be provided by supplier in the GST compliant invoice.

Vendor may collect TCS under section 206C(1H) of Income Tax Act,1961 if applicable. In case, vendor collects TCS under section 206C(1H) of Income Tax Act,1961, following compliance is required.

- a) TAN and PAN of vendor should appear in all invoices/claims. Copy of TAN /TCS registration is to be submitted.
- b) Amount of TCS and Assessable value on which TCS has been calculated should be specified clearly in the invoice.
- c) You shall be required to submit certificate of TCS in Form no. 270 within 15 days from the due date for furnishing the statement of tax collected at the source.

In case, you do not collect TCS under section 206C(1H) of Income Tax Act, 1961, following declaration is to be submitted alongwith each invoice: -

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"I/We hereby declare that I/We are not required to collect TCS" under section 206C(1H) of Income Tax Act,1961, on this bill.
In event of failure to comply with the provisions of the Act, or proper certificate not issued, or if tax collected but not remitted to the Government, or for any other reason and thereby causing loss to BHEL, the same shall be recoverable from the vendor with applicable interest.
Vendor shall comply with all statutory amendment/notifications in this respect

**31.0 Construction power &
Construction water**

Construction power shall be provided on free of charge. Construction water shall be provided free of cost. However, metering arrangement shall be established for measuring electricity & water consumption.

PEM/PG-I BHEL, NOIDA
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1X 660 MW SAGARDIGHI TPP EXTENSION UNIT 5



ANNEXURE -1 TO SCC

Excerpts from Chapter VI for compliance of GST Invoice as per Rule 46
TAX INVOICE, CREDIT AND DEBIT NOTES

46. Tax invoice.- Subject to rule 54, a tax invoice referred to in section 31 shall be issued by the registered person containing the following particulars, namely,-
- (a) name, address and Goods and Services Tax Identification Number of the supplier;
 - (b) a consecutive serial number not exceeding sixteen characters, in one or multiple series, containing alphabets or numerals or special characters- hyphen or dash and slash symbolised as "-" and "/" respectively, and any combination thereof, unique for a financial year;
 - (c) date of its issue;
 - (d) name, address and Goods and Services Tax Identification Number or Unique Identity Number, if registered, of the recipient;
 - (e) name and address of the recipient and the address of delivery, along with the name of the State and its code, if such recipient is un-registered and where the value of the taxable supply is fifty thousand rupees or more;
 - (f) name and address of the recipient and the address of delivery, along with the name of the State and its code, if such recipient is un-registered and where the value of the taxable supply is less than fifty thousand rupees and the recipient requests that such details be recorded in the tax invoice;
 - (g) Harmonised System of Nomenclature code for goods or services;
 - (h) description of goods or services;
 - (i) quantity in case of goods and unit or Unique Quantity Code thereof;
 - (j) total value of supply of goods or services or both;
 - (k) taxable value of the supply of goods or services or both taking into account discount or abatement, if any;
 - (l) rate of tax (central tax, State tax, integrated tax, Union territory tax or cess);
 - (m) amount of tax charged in respect of taxable goods or services (central tax, State tax, integrated tax, Union territory tax or cess);
 - (n) place of supply along with the name of the State, in the case of a supply in the course of inter-State trade or commerce;
 - (o) address of delivery where the same is different from the place of supply;
 - (p) whether the tax is payable on reverse charge basis; and
 - (q) signature or digital signature of the supplier or his authorized representative:
- (r) Quick Reference code, having embedded Invoice Reference Number (IRN) in it, in case invoice has been issued in the manner prescribed under sub-rule (4) of rule 48".

	PREPARED BY	CHECKED BY	REVIEWED BY	APPROVED BY
Name:	TARUN ARYA	ASHUTOSH SHARMA	HASEEN AHMED	B. L. BEDI
Designation	DY MANAGER /PEM (PG I)	DY MANAGER /PEM (PG I)	SR. MANAGER /PEM (PG I)	AGM(DH)/ PEM (PG I&II)
Signature				
Date				

Guidelines for Remote Inspection of PEM BOIs

1) OBJECTIVE:

To lay down the procedure for carrying out Remote Inspection of Bought-out Items (BOIs) for PEM suppliers wherever applicable.

2) SCOPE:

It will cover suppliers for packages of PEM BOIs for various project requirements.

Invitation is sent to the suppliers for remote inspection on applications like MS Teams, Webex, etc. by BHEL.

3) MINIMUM REQUIREMENTS AT SUPPLIER'S WORKS:

- i. Uninterrupted internet services
- ii. Good internet bandwidth (Min 100 Mbps)
- iii. Good resolution camera (2 nos) – one preferably CCTV (static at one place) and one hand hold (moving)
- iv. Smart phone with minimum 8MPi camera front and back both with optical zoom facility suitable for using web applications like Webex, MicroSoft (MS) Teams, etc.
- v. Computer and Scanner with good resolution
- vi. Digital signatures of supplier's Quality Engineer
- vii. Availability of web applications like Webex, MicroSoft (MS) Teams, as required.
- viii. All Test certificates, internal test reports, calibration reports, etc. for the items offered for inspection.
- ix. Availability of the above to be submitted to BHEL two days in advance before inspection.
- x. Dedicated team from supplier side for facilitating inspection requirements.
- xi. For ensuring proper visibility, the suggested Portable lighting sources (torch/ electric LED bulb of minimum 15 W) with no glare is to be ensured at offered job, location for remote inspection/testing. This is to be verified before start of the inspection.
- xii. The GPS location co-ordinates or any method to locate inspection location shall be captured indicating the location of the Vendor-Premises of remote inspection/testing.

4) MINIMUM REQUIREMENTS AT BHEL and CUSTOMER LOCATION :

- i. Uninterrupted internet services
- ii. Suitable internet bandwidth
- iii. Digital signatures wherever required.
- iv. Availability of web applications like Webex, MS Teams, etc. as required.
- v. Clearance from customer for conducting remote inspection

5) PROCEDURE:

- i. Supplier will raise the inspection call in BHEL - CQIR portal.
- ii. Supplier shall ensure availability of minimum requirements at supplier's works as mentioned above at point 3.

- iii. Before starting the inspection, the supplier shall submit the documents (TCs, internal test reports and calibration certificates as per approved QAP) two days before the date of inspection for review by BHEL and supplier shall coordinate with BHEL and if found satisfactory, inspection shall be considered for remote.
 - iv. Prior to commencement of remote inspection a pre inspection meeting shall be organised by BHEL inspector with supplier to ascertain the readiness for remote inspection.
- 6) During inspection, supplier shall share the location on Google maps for verifying the address of the manufacturer. Location may be captured by BHEL as screenshot.
- i. Inspection shall be on the basis of approved Quality Plans and associated reference documents mentioned.
 - ii. For witnessing inspection, supplier shall bring the mobile video camera near to the surface of the equipment or as per requirement of the inspector for clarity in viewing the test/ equipment which shall be the responsibility of supplier. Supplier shall ensure that proper lighting is available during live video streaming.
 - iii. Before start of the inspection, inspector shall ensure that all instruments shall have valid calibration report. Supplier shall ensure use of digital instruments preferably for inspection to the extent possible.
 - iv. Details of suppliers's dedicated team handling the remote inspection shall also be incorporated in the CQIR.
 - v. All details of inspection/ testing referred documents shall be mentioned in the CQIR. Recording of remote inspection shall be maintained by the BHEL inspector and this recording (unedited) shall be maintained at BHEL system for a minimum period of 3 years or till the warranty period whichever is later.
 - vi. PEM (Engineering) shall accord final technical clearance, in case of any deviation in inspected item noticed during inspection.
 - vii. Inspection shall be conducted by PEM-Q&BE assigned inspector along with PEM-Engg (if required). CQIR shall be prepared and maintained by PEM-Q&BE.
 - viii. PG will issue MDCC on the basis of acceptance of inspected items along with accepted packing photographs as per contract provisions.
- 7) **UNDERTAKING BY VENDOR:** Material inspected through remote inspections is meeting all technical requirements of BHEL. In case of any discrepancy from the above procedure/ material inspected, if found later, vendor will replace the materials without any cost implication to BHEL.
- 8) Vendor shall provide the signed and stamped of the above guidelines to BHEL as a token of acceptance.

1X660 MW SAGARDIGHI UNIT-5

TECHNICAL SPECIFICATION


FOR

STEAM TRAPS

SPECIFICATION NO. PE-TS-445-100-M010



BHARAT HEAVY ELECTRICALS LIMITED, POWER SECTOR
PROJECT ENGINEERING MANAGEMENT
NOIDA, INDIA

	TECHNICAL SPECIFICATION STEAM TRAPS 1X660 MW SAGARDIGHI UNIT-5	SPECIFICATION NO. PE-TS-445-100-M010	
		SECTION: -	
		REV. NO.: 00	DATE: 23.12.2021
		SHEET 1 OF 1	

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665350/2022/PS-PEM-MPL

	TECHNICAL SPECIFICATION STEAM TRAPS	SPECIFICATION NO. PE-TS-445-100-M010	
		SECTION: -I	
		REV. NO.: 00	DATE: 23.12.2021
		SHEET 1 OF 1	

SECTION-I

SPECIFIC TECHNICAL REQUIREMENTS

	SPECIFIC TECHNICAL REQUIREMENTS STEAM TRAPS 1X660 MW SAGARDIGHI UNIT-5	SPECIFICATION NO. PE-TS-445-100-M010	
		SECTION: I	
		REV. NO.: 00	DATE: 23.12.2021
		Sheet 1 of 4	

1. GENERAL

- 1.1 The steam traps shall meet the technical requirements and conform to the requirements of this Section-I and Data sheet A of Section II. However, in the event of contradictions between Section –I & Section –II/ Data sheet A, Section –II/ Data sheet A will prevail.

2. SCOPE OF SUPPLY


- 2.1 The steam traps (Thermodynamic and Inverted Bucket type along with strainer) shall be supplied as per Data sheet A of Section II. For detail refer the same.
- 2.2 Commissioning spares, if any.

3. DESIGN REQUIREMENTS AND CONSTRUCTION FEATURES

- 3.1 The traps covered in the specification shall be of Inverted Bucket & Thermodynamic with auto-drain arrangement conforming to supplier's own proven design.
- 3.2 All traps shall be with integral/external strainer designed suitably to prevent the internals of the trap from damage due to dirt etc. The strainer shall have a screwed blow-off connection with a removable plug.
- 3.3 Straining area of strainer shall be kept as minimum four times of the pipe cross-sectional area.
- 3.4 The traps should be suitable for horizontal/vertical mounting with internals easily accessible and replaceable.
- 3.5 Arrow showing inlet should be cast on the body of traps and strainers.
- 3.6 Wherever steam traps are coming under purview of IBR, the relevant stipulations of IBR shall be applicable for compliance.
- 3.7 The trap cover shall be such that it can be removed without breaking the inlet or discharge pipe.
- 3.8 On line cleaning of the strainer element shall also be possible.
- 3.9 Seat diameter for Inverted Bucket trap shall be selected based on the required maximum condensate flow rate & working pressure which will be indicated at ordering stage.
- 3.10 All traps and strainers shall have socket weld ends as per ANSI B16.11 for size upto 50 NB and butt weld ends as per ASME B16.25 for size above 50 NB.
- 3.11 A metallic (stainless steel plate 2mm thick) nameplate shall be fitted on each valve. Nameplate inscription required for each valve shall be indicated at the contract stage. Inscriptions shall be engraved 1 mm deep filled with enamel paint.

4. MATERIALS

- 4.1 The materials of construction of main parts of traps shall be specified in Data sheet-A.
- 4.2 The materials of construction of the remaining parts shall be suitable for the service conditions shall be subject to approval of the purchaser.
- 4.3 Materials used in manufacture of traps shall be of tested quality. The internals components of internals shall be stainless steel construction (AISI 316).

	SPECIFIC TECHNICAL REQUIREMENTS STEAM TRAPS 1X660 MW SAGARDIGHI UNIT-5	SPECIFICATION NO. PE-TS-445-100-M010	
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5. TESTING AND INSPECTION

- 5.1 The items covered under this contract shall be subjected to inspection, testing and quality surveillance as per the quality plans attached with this specification. The Inspection Agency shall, at all reasonable times, have access to Vendor's works, Quality Control records and all facilities as reasonably required for carrying out the inspection and testing efficiently, and these shall be provided by the vendor free of cost.
- 5.2 The minimum NDT/testing and inspection requirements for traps shall be as per the attached Quality Plan. However, in case of order, final inspection and testing shall be carried out as per the final approved (By BHEL/Customer) quality plan without any price implications.
- 5.3 The Quality Plan enclosed with this specification specify minimum quality control requirement. During contract stage vendor shall furnish this Quality Plan duly signed & stamped for BHEL approval. Quality plans shall be approved by BHEL and customer (as applicable). All inspection and testing, as per approved QP, shall be carried out by BHEL/ BHEL representative and customer (as applicable). In case inspection is by both BHEL and their customer, then the inspection can be carried out jointly or separately, which will be informed later. In case of the foreign bidder, inspection shall be carried out by reputed third party (Lloyds, TUV or equivalent).
- 5.4 The charges for third party inspection (Lloyds, TUV or equivalent) for foreign bidders shall be included in the base price of the item by the bidder. This third party agency shall be approved by BHEL. Bidder to inform the same in the offer and mention the same in Quality Plan.


NOTE: There may be minor changes in quality plan depending on customer/consultant comments which will have to be accommodated by vendor at no extra cost.

6. EXCLUSIONS

Erection & Commissioning of equipment at site.

7. SURFACE PREPARATION & PAINTING

- 7.1 The surface preparation of all exterior and interior surfaces of traps and strainers shall include the following:
- Removal of oil, grease and dirt.
 - Removal of rust and scale etc.
 - Sand blasting/ shot blasting.
- 7.2 Surface preparation shall be done by means of sand blasting, which shall conform to SSPC SP10/NACE 2/Sa2½ Standard.
- 7.3 Primer Coat shall consist of one coat (minimum DFT of 100 microns) of epoxy resin based zinc phosphate primer.
- 7.4 Intermediate Coat (or Under Coat) shall consist of one coat (minimum DFT of 100 microns) epoxy resin based paint pigmented with Titanium Dioxide.

	SPECIFIC TECHNICAL REQUIREMENTS STEAM TRAPS 1X660 MW SAGARDIGHI UNIT-5	SPECIFICATION NO. PE-TS-445-100-M010	
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7.5 Top Coat shall consist of one coat (minimum DFT of 75 microns) of epoxy paint of approved shade / aluminum color with glossy finish. Additional one coat (minimum DFT of 25 microns) of Finish Coat of polyurethane shall be provided.

7.6 Total DFT of paint system shall not be less than 300 microns.

8. PACKING INSTRUCTIONS:

- a) Each trap and strainer shall be drained, cleaned, prepared and suitably protected in such a way so as to minimize the possibility of damage and deterioration during transit and storage.
- b) The trap and strainer shall be dispatched in total assembled form.
- c) Body ends shall be suitably sealed to protect them against damage during transit and storage.
- d) Trap and strainer Tag Nos. shall be incorporated in all the dispatch documents.
- e) Proper care shall be taken to avoid damage to the finished surface during transit.
- f) All the traps and strainers shall be packed suitably in wooden cases in order to avoid damage during transit and also during storage at site in tropical climate conditions for a period of 15-18 months.
- g) Vendor to provide the following:
 - Photographs (soft) of traps and strainers duly placed inside the wooden box just before final packing.
 - Photographs (soft) of the wooden box in which the traps and strainers have been finally packed just before dispatch.

Clearance for dispatch of traps and strainers will be given only after receiving the photos in satisfactory condition as mentioned in the condition stated above.

9. SPARES

- a) **Mandatory Spares:** As per Datasheet-A.

10. DOCUMENTS TO BE SUBMITTED ALONG WITH OFFER

Bidder shall submit the following documents duly filled, signed and stamped along with the bid:


- a) Compliance sheet
- b) Documents as per the list indicated in the NIT.

The above are the only documents which will be used for technical evaluation unless other documents are asked for during technical clarifications. Any other technical document enclosed with the bid shall be ignored for the purpose of technical evaluation. All other documents attached with the specification are for information of the vendor and no comments shall be marked on them.

11. DOCUMENTS TO BE SUBMITTED AFTER AWARD OF CONTRACT:

11.1 CATEGORY-A

- a) GA Drawing indicating complete cross sectional arrangement of traps and strainer. Binding dimensions, dismantling clearances, weight and Bill of Material

	SPECIFIC TECHNICAL REQUIREMENTS STEAM TRAPS 1X660 MW SAGARDIGHI UNIT-5	SPECIFICATION NO. PE-TS-445-100-M010	
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incorporating all material of construction (MOC) of various parts & relevant standard to which MOC confirms to.

b) Quality plans of steam traps (inverted bucket and Thermodynamic) and Y- type strainer duly signed and stamped.

Submission/Resubmission of above documents shall be considered for delay analysis by BHEL

11.2 CATEGORY-B

a) Test procedure for functional test of traps (Thermodynamic and Inverted bucket)
Test procedure is required as information.

	TECHNICAL SPECIFICATION STEAM TRAPS 1X660 MW SAGARDIGHI UNIT-5	SPECIFICATION NO. PE-TS-445-100-M010	
		SECTION: -II	
		REV. NO.: 00	DATE: 23.12.2021
		SHEET 1 OF 1	

SECTION-II

- DATA SHEET – A
- QUALITY PLAN
- COMPLIANCE SHEET



**DATASHEET - A
REQUIREMENT OF STEAM TRAPS
FOR 1X660 MW SAGARDIGHI UNIT-5**

SPECIFICATION NO.: PE-TS-445-100-M010

VOL: IIB

SECTION: II


REV:00 DATE: 23.12.2021

SHEET 1 OF 1

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
SL. NO.	TAG Nos.	TYPE	CONNECTING PIPE SIZE (NB)	PIPE THICKNESS (MM)	SERVICE DESCRIPTION	SERVICE	DESIGN PRESURE (KG/CM2(G))	DESIGN TEMP(deg C)	OPERATING PRESSURE AT INLET OF TRAP (Kg/cm2)	OPERATING PRESSURE AT D/S OF TRAP (Kg/cm2)	MAX. CONDESATE RATE (KG/HR)	FACTOR OF SAFETY	BODY	MATERIAL BODY INTERNALS	END CONN	IBR REQUIRED	TOTAL QUANTITY (MAIN)	TOTAL QUANTITY MANDATORY SPARES (COMPLETE TRAPS)	REMARKS
1	ASV-107, ASV-113, ASV-118, ASV-123, ASV-128, ASV-133, ASV-138, ASV-143, ASV-181, ASV-186, CRHV-151, EXV-107, EXV-113, EXV-130, EXV-140 CONTINGENCY 6 Nos	THERMODYNAMIC STEAM TRAP-LP	33.4	4.55	POWER CYCLE	INTERMITTENT	20	375	16	0.1 (VAC)	10	NOT LESS THAN 2	CS	SS	SW	YES	21	3	
2	CRHV-121, CONTINGENCY 01 NO.	THERMODYNAMIC STEAM TRAP-HP	33.4	4.55	POWER CYCLE	INTERMITTENT	74.2	380	65.44	0.1 (VAC)	10		CS/SS/ EQUIVALENT OR HIGHER	SS	SW	YES	2	1	
3	DRV-67	INVERTED BUCKET TRAP	88.9	5.49	DRAIN LINE	CONTINUOUS	3.5/ VAC	115	1.03 (VAC)	0.1 (VAC)	300		CS	SS	BW	NO	1	1	
4	DRV-66	EXTERNAL Y-TYPE STRAINER	88.9	5.49	DRAIN LINE	CONTINUOUS	3.5/ VAC	115	1.03 (VAC)	0.1 (VAC)	300		CS	SS	BW	NO	1	1	
																	25	6	

NOTES:

- Bidder to offer steam trap and strainer meeting the parameters mentioned in the above Datasheet-A.
- For detailed material of construction refer DataSheet-A.
- For item no. 1 and 2, Bidder to supply Suitable matching pieces to match with connecting pipe size. For item no. 3 and 4, strainer inlet & trap outlet shall be matched with connecting pipe size by bidder. Strainer outlet and trap inlet shall be matched through expander/reducer. Bidder to consider all reducer/expander, as required, in their scope.
- Painting: Refer clause 7 of Section-I of technical specification .
- Socket Welding (SW) will be as per ASME-B16.11; Butt welding (BW) will be as per ASME B16.25.
- CS:Carbon Steel, SS: Stainless Steel CCS-Cast carbon steel, VAC: Vacuum, ATM: Atmospheric.
- Equivalent/higher material is acceptable.
- Mandatory spares for Steam traps and Y type strainers - required to complete one full assembly/complete set.

	DATA SHEET-A STEAM TRAPS 1X660 MW SAGARDIGHI UNIT-5	SPECIFICATION NO. PE-TS-445-100-M010	
		SECTION : II	
		REV. NO.: 00	
		Page 2 of 2	DATE: 23.12.2021

1. Thermodynamic type steam trap with integral strainer

MATERIAL OF CONSTRUCTION (THERMODYNAMIC STEAM TRAP)

S.NO.	PART NAME	MATERIAL REQUIRED
1	Body	ASTM A 105
2	Cap and Plug	ASTM A 105
3	Trap Disc	AISI316 (Equi. CA 40) (Hardened to 40 RC differential hardness shall be maintained for disc and body seats).
4	Gasket	Non asbestos fiber
5	Strainer	SS 316 (20 mesh screen)
6	Name plate	SS 316 (2 mm thick)

NOTE: Equivalent/higher material is acceptable and will be binding to bidders. Bidder to furnish detail MOC of the traps offered along with the offer.

2. Inverted bucket steam trap with external Y-type strainer


MATERIAL OF CONSTRUCTION (INVERTED BUCKET STEAM TRAP)

S.NO.	PART NAME	MATERIAL REQUIRED
1	Body and cap/cover	Cast Carbon Steel as per ASTM A216 Gr.WCB
2	Valve, Valve seat	AISI 316(furnace hardened to minimum 40 RC). Differential hardness Shall be maintained between seats
3	Valve lever, Bucket, Bucket clip	AISI 316
4	Bolts/Nuts	ASTM A193 Gr.B7/ASTM A194 Gr.2H
5	Gasket	Non asbestos type
6	Name plate	SS 316 (2 mm thick)
7	Other internals	Stainless steel

MATERIAL OF CONSTRUCTION (EXTERNAL Y-TYPE STRAINER)


S.NO.	PART NAME	MATERIAL REQUIRED
1	Body and Strainer cap/cover	Cast Carbon Steel as per ASTM A216 Gr.WCB
2	Strainer screen	SS 316 (20 mesh screen)
3	Gasket	Non asbestos type
4	Name plate	SS 316 (2 mm thick)

NOTE: Equivalent/higher material is acceptable and will be binding to bidders. Bidder to furnish detail MOC of the traps offered along with the offer.

	MANUFACTURER/ BIDDER/ SUPPLIER NAME & ADDRESS	STANDARD QUALITY PLAN		SPEC. NO : PE-TS-445-100-M010 REV-00	DATE: 30.11.2021
		CUSTOMER : M/s WBPDC		QP NO.: PE-QP-445-100-M010 REV-00	DATE: 30.11.2021
		PROJECT: 1X660 MW SAGARDIGHI UNIT-5		PO NO.:	DATE:
		ITEM: STEAM TRAP (THERMODYNAMIC)	SYSTEM: POWER PIPING SECTION: II		SHEET 1 OF 4


SI No.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	Format of RECORD	Agency			REMARKS	
					M	C/N					*	**		M
1	2	3	4	5	6		7	8	9	*	**			
					M	C/N				D	M	C	N	
1.0 Raw Material														
1.1	Body, Cap/cover, Disc & Plug	1. Physical & Chemical Properties	MA	Physical & Chemical Analysis	1 per Heat / 1 per Batch	-	Approved DRG/ Relevant standard	Approved DRG/ Relevant standard	Mill Test Certificate	√	P/W	V	V	Correlation Required for Body and cap/cover with Mill test Certificate.
		2. Surface Defects	MA	Visual Examination	100%	-	MSS-SP-55	MSS-SP-55	Inspection Report	√	P/W	V	V	
		3. Dimensions	MA	Measurement	100%	-	Approved DRG	Approved DRG	Inspection Report	√	P/W	-	-	
1.2	Screen	1.Chemical Properties	MA	Chemical Test	1 per Sheet/ 1 per Batch	-	Approved DRG/ Relevant standard	Approved DRG /Relevant standard	Test Certificate	√	P/W	V	V	
		2.Mesh Size/ Perforation dia	MA	Measurement		-	Approved DRG	Approved DRG	Inspection Report	√	P/W	V	V	
2.0 In-Process Machining														
2.1	All Components	1.Dimensions	MA	Measurement	100%	-	Approved DRG	Approved DRG	Inspection Report	√	P/W	-	-	
		2. Surface Defects	MA	Visual	100%	-	MSS-SP-55	MSS-SP-55		√	P/W	V	V	
2.2	Body seat & Disc	1. Hardness of disc	CR	Hardness Test	100%	-	Approved DRG	Approved DRG	Test Certificate	√	P/W	V	V	
		2. Surface defect	CR	PT	100%	-	ASTM E165	No Defects	Inspection Report	√	P/W	V	V	
		3. Surface finish	CR	Blue matching	100%	-	Manufacturer's standard	Uniform metal to metal contact		√	P/W	V	V	

BHEL					BIDDER/VENDOR		FOR CUSTOMER REVIEW & APPROVAL			
ENGINEERING			QUALITY		Sign & Date		Doc No:			
Prepared by:	Sign & Date	Name	Checked by:	Sign & Date	Name	Seal	Sign & Date		Name	Seal
Prepared by:	PRANJAL OMAR	Pranjal Omar	Checked by:	Ashish Panigrahi	Ashish Panigrahi		Reviewed by:			
Reviewed by:	SANJAY KUMAR	Sanjay kumar	Reviewed by:	RITESH KUMAR JAISWAL	RK Jaiswal		Approved by:			





	MANUFACTURER/ BIDDER/ SUPPLIER NAME & ADDRESS	STANDARD QUALITY PLAN		SPEC. NO : PE-TS-445-100-M010 REV-00	DATE: 30.11.2021
		CUSTOMER : M/s WBPDC		QP NO.: PE-QP-445-100-M010 REV-00	DATE: 30.11.2021
		PROJECT: 1X660 MW SAGARDIGHI UNIT-5		PO NO.:	DATE:
		ITEM: STEAM TRAP (THERMODYNAMIC)	SYSTEM: POWER PIPING SECTION: II	SHEET 2 OF 4	


SI No.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	Format of RECORD	Agency			REMARKS	
					M	C/N					*	**		M
3.0	Sub-Assembly													
3.1	Cap/Cover	Alignment	MA	Visual	100%	-	Manufacturer's standard	Proper fitting	Log Book	-	P/W	-	-	
4.0	Testing													
4.1	Complete Assembly	1. Cleaning & Deburring	MA	Visual	100%	-	Approved DRG/ Relevant standard	Approved DRG/ Relevant standard	Inspection Report	√	P/W	V	V	
		2. Dimensions	CR	Measurement	100%	REF. NOTE 2	Approved DRG	Approved DRG	Inspection Report	√	P/W	W	V	
		3. Leak tightness of Body	CR	Hydraulic test	100%	REF. NOTE2	Approved DRG/ Relevant standard	No leakage	TC/IBR format	√	P/W	W#	V	# If IBR is applicable, in addition to witness, IBR certificate to be verified.
		4. Function of Trap	CR	Performance Test*	100%	REF. NOTE 2	Manufacturer's Test procedure	Smooth & effective operation	Test certificate	√	P/W	W	V	*Performance testing in simulated condition as per test procedure
4.2	Flow Capacity Test (Type test)	Condensate Discharge	CR	Discharge Flow	1 per pressure rating & orifice size trap	-	Flow Capacity charts/type test reports	Design flow capacity	Type test certificate	√	P/W	V	V	
4.3	End connection	1. Dimensions	CR	Measurement	100%	REF. NOTE 2	Approved DRG	Approved DRG	Inspection Report	√	P/W	W	V	
		2. Surface Defects	CR	PT	100%	-	ASTM E165	No Defects	Inspection Report	√	P/W	V	V	
BHEL					BIDDER/VENDOR					FOR CUSTOMER REVIEW & APPROVAL				
ENGINEERING					QUALITY									
Sign & Date		Name			Sign & Date		Name			Doc No:				
Seal										Sign & Date		Name		Seal
Prepared by:	PRANJAL OMAR	Pranjal Omar	Checked by:	Ashish Panigrahi	Ashish Panigrahi					Reviewed by:				
Reviewed by:	SANJAY KUMAR	Sanjay kumar	Reviewed by:	RITESH KUMAR JAISWAL	RK Jaiswal					Approved by:				

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	MANUFACTURER/ BIDDER/ SUPPLIER NAME & ADDRESS	STANDARD QUALITY PLAN		SPEC. NO : PE-TS-445-100-M010 REV-00	DATE: 30.11.2021
		CUSTOMER : M/s WBPDC		QP NO.: PE-QP-445-100-M010 REV-00	DATE: 30.11.2021
		PROJECT: 1X660 MW SAGARDIGHI UNIT-5		PO NO.:	DATE:
		ITEM: STEAM TRAP (THERMODYNAMIC)	SYSTEM: POWER PIPING SECTION: II		SHEET 3 OF 4

SI No.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	Format of RECORD	*	Agency			REMARKS
					M	C/N					D	M	C	
1	2	3	4	5	6		7	8	9		**			
4.4	Final Inspection	Completeness & cleanliness	MA	Visual	100%	REF. NOTE 2	Approved DRG	Approved DRG	Inspection Report	√	P/W	W	V	
5.0	Painting	Surface preparation & Painting	MA	Visual	100%	-	Approved DRG/ Relevant standard	Approved DRG/ Relevant standard	Inspection Report	√	P/W	V	V	
6.0	Packing	Packing Soundness	MA	Visual	100%	100%	Approved DRG / Packing procedure (if applicable)	Approved DRG / Packing procedure (if applicable)	Inspection Report	√	P/W	W	V	Refer Note no.3

BHEL						BIDDER/VENDOR		FOR CUSTOMER REVIEW & APPROVAL			
ENGINEERING			QUALITY			Sign & Date		Doc No:			
Prepared by:	Sign & Date	Name	Checked by:	Sign & Date	Name	Seal		Sign & Date	Name	Seal	
PRANJAL OMAR		Pranjal Omar	Ashish Panigrahi		Ashish Panigrahi						
SANJAY KUMAR		Sanjay kumar	RITESH KUMAR JAISWAL		RK Jaiswal						

	MANUFACTURER/ BIDDER/ SUPPLIER NAME & ADDRESS	STANDARD QUALITY PLAN		SPEC. NO : PE-TS-445-100-M010 REV-00	DATE: 30.11.2021
		CUSTOMER : M/s WBPDCI		QP NO.: PE-QP-445-100-M010 REV-00	DATE: 30.11.2021
		PROJECT: 1X660 MW SAGARDIGHI UNIT-5		PO NO.:	DATE:
		ITEM: STEAM TRAP (THERMODYNAMIC)	SYSTEM: POWER PIPING	SECTION: II	SHEET 4 OF 4

NOTE:

- In case of foreign supplier, all test certificates shall be furnished by the supplier, duly witnessed/verified by supplier's TPI.
- The Quantum of check to be witnessed (W) is 10% of quantity or Min. 2 Nos. at random by BHEL/Customer & 100 % by Vendor for each type, Size & Rating.
- Following to be noted for packing:
 - Material shall be packed suitably in order to avoid damage of paint and valve during transit and also during storage at site in tropical climate conditions for a period of 15-18 months.
 - Photographs of the packing to be provided just before dispatch for information of PEM.
- The latest revisions/year of issue of all the standard indicated in the QP shall be referred.
- BHEL reserves the right for conducting repeat test, if required.

LEGENDS:

*Records, identified with "Tick" (✓) shall be essentially included by SUPPLIER in QA documentation.


** M: SUPPLIER/ MANUFACTURER/ SUB-SUPPLIER; C: MAIN SUPPLIER/ BHEL/ THIRD PARTY INSPECTION AGENCY (TPI);

N: CUSTOMER

P: perform, W: witness, V: verification as appropriate, D: Documentation

MA: MAJOR, MI: MINOR, CR: CRITICAL


BHEL						BIDDER/VENDOR		FOR CUSTOMER REVIEW & APPROVAL			
ENGINEERING			QUALITY			Sign & Date		Doc No:			
	Sign & Date	Name		Sign & Date	Name	Seal		Sign & Date	Name	Seal	
Prepared by:	PRANJAL OMAR ✓ <small>Digitally signed by PRANJAL OMAR DN: cn=PRANJAL OMAR, o=BHEL, ou=PEM, email=pranjalomar@bhel.co.in, Date: 2023.11.14 12:47:45+05'30'</small>	Pranjal Omar	Checked by:	Ashish Panigrahi ✓ <small>Digitally signed by Ashish Panigrahi DN: cn=Ashish Panigrahi, o=BHEL, ou=PEM, email=ashishpanigrahi@bhel.co.in, Date: 2023.11.14 12:22:45+05'30'</small>	Ashish Panigrahi						
Reviewed by:	SANJAY KUMAR ✓ <small>Digitally signed by SANJAY KUMAR DN: cn=SANJAY KUMAR, o=BHEL, ou=PEM, email=sanjaykumar@bhel.co.in, Date: 2023.11.14 12:48:45+05'30'</small>	Sanjay kumar	Reviewed by:	RITESH KUMAR JAISWAL ✓ <small>Digitally signed by RITESH KUMAR JAISWAL DN: cn=RITESH KUMAR JAISWAL, o=BHEL, ou=PEM, email=riteshkumar@bhel.co.in, Date: 2023.11.14 12:48:45+05'30'</small>	RK Jaiswal						
								Reviewed by:			
								Approved by:			

	MANUFACTURER/ BIDDER/ SUPPLIER NAME & ADDRESS	STANDARD QUALITY PLAN		SPEC. NO : PE-TS-445-100-M010 REV-00	DATE: 30.11.2021
		CUSTOMER : M/s WBPDCI		QP NO.: PE-QP-445-100-M010 REV-00	DATE: 30.11.2021
		PROJECT: 1X660 MW SAGARDIGHI UNIT-5		PO NO.:	DATE:
		ITEM: STEAM TRAP (INVERTED BUCKET)	SYSTEM: POWER PIPING	SECTION: II	SHEET 1 OF 4

SI No.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	Format of RECORD	Agency			REMARKS	
					M	C/N					*	**		M
1	2	3	4	5	6		7	8	9	D				
1.0 Materials														
1.1	Body, Cap/Cover, Valve, Valve Seat, Bucket, Valve Lever, Bucket Clip & Weight	1. Physical & Chemical Properties	MA	Physical & Chemical Analysis	1 per Heat / 1 per Batch	-	Approved DRG/ Relevant standard	Approved DRG/ Relevant standard	Mill Test Certificate	√	P/W	V	V	Correlation Required for Body and cap/cover with Mill test Certificate.
		2. Surface Defects	MA	Visual	100%	-	MSS-SP-55	MSS-SP-55	Inspection Report	√	P/W	V	V	
		3. Dimensions	MA	Measurement	100%	-	Approved DRG	Approved DRG	Inspection Report	√	P/W	-	-	
1.2	Integral Strainer (If Applicable)	1. Chemical Properties	MA	Chemical Test	1 per Sheet/ 1 per Batch	-	Approved DRG/ Relevant standard	Approved DRG / Relevant standard	Test Certificate	√	P/W	V	V	
		2. Mesh Size / Perforation Dia	MA	Measurement		-	Approved DRG	Approved DRG	Inspection Report	√	P/W	V	V	
2.0 In-Process Machining														
2.1	All Components	1. Dimensions	MA	Measurement	100%	-	Approved DRG	Approved DRG	Inspection Report	√	P/W	-	-	
		2. Surface Defects	MA	Visual	100%	-	MSS-SP-55	MSS-SP-55	Inspection Report	√	P/W	V	V	
2.2	Valve, Valve Seat	1. Hardness	CR	Hardness Test	100%	-	Approved DRG	Approved DRG	Test Certificate	√	P/W	V	V	
		2. Surface Defects	CR	PT	100%	-	ASTM E165	No Defects	Inspection Report	√	P/W	V	V	


BHEL					BIDDER/VENDOR		FOR CUSTOMER REVIEW & APPROVAL			
ENGINEERING			QUALITY		Sign & Date		Doc No:			
Prepared by:	Sign & Date	Name	Checked by:	Sign & Date	Name	Seal		Sign & Date	Name	Seal
Prepared by:	PRANJA L OMAR	Pranjal Omar	Checked by:	Ashish Panigrahi	Ashish Panigrahi					
Reviewed by:	SANJAY KUMAR	Sanjay kumar	Reviewed by:	RITESH KUMAR JAISWAL	RK Jaiswal					
Approved by:			Approved by:							

665350/2022/PS-PEM-MPL

	MANUFACTURER/ BIDDER/ SUPPLIER NAME & ADDRESS	STANDARD QUALITY PLAN			SPEC. NO : PE-TS-445-100-M010 REV-00	DATE: 30.11.2021
		CUSTOMER : M/s WBPDCI			QP NO.: PE-QP-445-100-M010 REV-00	DATE: 30.11.2021
		PROJECT: 1X660 MW SAGARDIGHI UNIT-5			PO NO.:	DATE:
		ITEM: STEAM TRAP (INVERTED BUCKET)	SYSTEM: POWER PIPING	SECTION: II	SHEET 2 OF 4	


SI No.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	Format of RECORD	Agency			REMARKS	
					M	C/N					*	D		M
1	2	3	4	5	6	7	8	9		**				
		3. Surface finish	CR	Blue Matching	100%	-	Manufacture's standard	Uniform Metal to Metal Contact	Inspection Report	√	P/W	V	V	
3.0 Sub-Assembly														
3.1	Valve & Valve Seat	Leak Tightness	CR	Air/Hydro test	100%	-	Approved DRG/ Relevant standard	Approved DRG/ Relevant standard	Inspection report	√	P/W	V	V	
3.2	Cap/Cover	Alignment	MA	Visual	100%	-	Manufacture's standard	Proper Fitting	Log Book	-	P/W	-	-	
4.0 Testing														
4.1	Complete Assembly	1.Cleanliness & Completeness	MA	Visual	100%	-	Approved DRG/ Relevant standard	Approved DRG/ Relevant standard	Inspection Report	√	P/W	V	V	
		2.Dimensions	CR	Measurement	100%	REF NOTE 2	Approved DRG	Approved DRG	Inspection Report	√	P/W	W	V	
		3.Leak Tightness of Body	CR	Hydraulic Test	100%	REF NOTE 2	Approved DRG/ Relevant standard	No Leakage	TC/IBR format	√	P/W	#W	V	# If IBR is applicable, in addition to witness, IBR certificate to be verified.
		4.Function of Trap	CR	Performance Test *	100%	REF. NOTE 2	Manufacturer's Test procedure	Smooth and Effective Operation	Test Certificate	√	P/W	W	V	*Performance testing in simulated conditions as per test procedure.

BHEL					BIDDER/VENDOR		FOR CUSTOMER REVIEW & APPROVAL			
ENGINEERING			QUALITY		Sign & Date		Doc No:			
Prepared by:	Sign & Date	Name	Checked by:	Sign & Date	Name	Seal	Sign & Date	Name	Seal	
Prepared by:	PRANJAL OMAR	Pranjal Omar	Checked by:	Ashish Panigrahi	Ashish Panigrahi		Reviewed by:			
Reviewed by:	SANJAY KUMAR	Sanjay kumar	Reviewed by:	RITESH KUMAR JAISWAL	RK Jaiswal		Approved by:			

	MANUFACTURER/ BIDDER/ SUPPLIER NAME & ADDRESS	STANDARD QUALITY PLAN		SPEC. NO : PE-TS-445-100-M010 REV-00	DATE: 30.11.2021
		CUSTOMER : M/s WBPDCI		QP NO.: PE-QP-445-100-M010 REV-00	DATE: 30.11.2021
		PROJECT: 1X660 MW SAGARDIGHI UNIT-5		PO NO.:	DATE:
		ITEM: STEAM TRAP (INVERTED BUCKET)	SYSTEM: POWER PIPING	SECTION: II	SHEET 3 OF 4

SI No.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	Format of RECORD	Agency			REMARKS	
					M	C/N					*	**		M
1	2	3	4	5	6		7	8	9	D				
4.2	Flow Capacity Test (Type Test)	Condensate Discharge	CR	Discharge Flow	1 Per Pressure Rating & Orifice Size Trap	-	Flow Capacity charts/type test reports	Design flow capacity	Type Test Certificate	√	P/W	V	V	
4.3	End connection	1.Dimensions	CR	Measurement	100%	REF. NOTE 2	Approved DRG	Approved DRG	Inspection Report	√	P/W	W	V	
		2.Surface Defects	CR	PT	100%	-	ASTM E165	No Defects	Inspection Report	√	P/W	V	V	
4.4	Final Inspection	Completeness & cleanliness	MA	Visual	100%	REF. NOTE 2	Approved DRG	Approved DRG	Inspection Report	√	P/W	W	V	
5.0	Painting	Surface Preparation & Painting	MA	Visual	100%	-	Approved DRG/ Relevant standard	Approved DRG/ Relevant standard	Inspection Report	√	P/W	V	V	
6.0	Packing	Packing Soundness	MA	Visual	100%	100%	Approved DRG / Packing procedure (if applicable)	Approved DRG / Packing procedure (if applicable)	Inspection Report	√	P/W	W	V	Refer Note no.3

BHEL					BIDDER/VENDOR		FOR CUSTOMER REVIEW & APPROVAL			
ENGINEERING			QUALITY		Sign & Date		Doc No:			
Prepared by:	Sign & Date	Name	Checked by:	Sign & Date	Name	Seal		Sign & Date	Name	Seal
Prepared by:	PRANJAL OMAR	Pranjal Omar	Checked by:	Ashish Panigrahi	Ashish Panigrahi			Reviewed by:		
Reviewed by:	SANJAY KUMAR	Sanjay kumar	Reviewed by:	RITESH KUMAR JAISWAL	RK Jaiswal			Approved by:		

	MANUFACTURER/ BIDDER/ SUPPLIER NAME & ADDRESS	STANDARD QUALITY PLAN		SPEC. NO : PE-TS-445-100-M010 REV-00	DATE: 30.11.2021
		CUSTOMER : M/s WBPDCI		QP NO.: PE-QP-445-100-M010 REV-00	DATE: 30.11.2021
		PROJECT: 1X660 MW SAGARDIGHI UNIT-5		PO NO.:	DATE:
		ITEM: STEAM TRAP (INVERTED BUCKET)	SYSTEM: POWER PIPING	SECTION: II	SHEET 4 OF 4

NOTE:

- In case of foreign supplier, all test certificates shall be furnished by the supplier, duly witnessed/verified by supplier's TPI.
- The Quantum of check to be witnessed (**W**) is 10% of quantity or Min. 2 Nos. at random by BHEL/Customer & 100 % by Vendor for each type, Size & Rating.
- Following to be noted for packing:
 - Material shall be packed suitably in order to avoid damage of paint and valve during transit and also during storage at site in tropical climate conditions for a period of 15-18 months.
 - Photographs of the packing to be provided just before dispatch for information of PEM.
- The latest revisions/year of issue of all the standard indicated in the QP shall be referred.
- BHEL reserves the right for conducting repeat test, if required.

LEGENDS:

*Records, identified with "Tick" (✓) shall be essentially included by SUPPLIER in QA documentation.


** M: SUPPLIER/ MANUFACTURER/ SUB-SUPPLIER; C: MAIN SUPPLIER/ BHEL/ THIRD PARTY INSPECTION AGENCY (TPI);

N: CUSTOMER

P: perform, W: witness, V: verification as appropriate, D: Documentation


MA: MAJOR, MI: MINOR, CR: CRITICAL

BHEL						BIDDER/VENDOR		FOR CUSTOMER REVIEW & APPROVAL			
ENGINEERING			QUALITY			Sign & Date		Doc No:			
	Sign & Date	Name		Sign & Date	Name	Seal		Sign & Date	Name	Seal	
Prepared by:	PRANJAL OMAR ✓ <small>Digitally signed by PRANJAL OMAR DN: cn=Pranjal Omar, o=BHEL, ou=PEM, email=pranjal.omar@bhel.com, Date: 2022.11.30 11:48:57</small>	Pranjal Omar	Checked by:	Ashish Panigrahi ✓ <small>Digitally signed by Ashish Panigrahi DN: cn=Ashish Panigrahi, o=BHEL, ou=PEM, email=ashish.panigrahi@bhel.com, Date: 2022.12.04 12:53:04</small>	Ashish Panigrahi			Reviewed by:			
Reviewed by:	SANJAY KUMAR ✓ <small>Digitally signed by SANJAY KUMAR DN: cn=Sanjay Kumar, o=BHEL, ou=PEM, email=sanjaykumar@bhel.com, Date: 2022.12.07 11:50:27</small>	Sanjay kumar	Reviewed by:	RITESH KUMAR JAISWAL ✓ <small>Digitally signed by RITESH KUMAR JAISWAL DN: cn=Ritesh Kumar Jaiswal, o=BHEL, ou=PEM, email=ritesh.jaiswal@bhel.com, Date: 2022.12.07 11:50:27</small>	RK Jaiswal			Approved by:			

	MANUFACTURER/ BIDDER/ SUPPLIER NAME & ADDRESS	STANDARD QUALITY PLAN		SPEC. NO : PE-TS-445-100-M010 REV-00	DATE: 30.11.2021
		CUSTOMER : M/s WBPDCI		QP NO.: PE-QP-445-100-M010 REV-00	DATE: 30.11.2021
		PROJECT: 1X660 MW SAGARDIGHI UNIT-5		PO NO.:	DATE:
		ITEM: Y-TYPE STEAM STRAINER	SYSTEM: POWER PIPING	SECTION: II	SHEET 1 OF 3

SI No.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	Format of RECORD	Agency			REMARKS	
					M	C/N					*	**		M
1	2	3	4	5	6		7	8	9	*	**			
					M	C/N				D	M	C	N	
1.0	Raw Material													
1.1	Body, Cap/Cover	1. Physical & Chemical Properties	MA	Physical & Chemical properties	1 per Heat / 1 per Batch	-	Approved DRG/ Relevant standard	Approved DRG/ Relevant standard	Mill Test Certificate	√	P/W	V	V	Correlation Required for Body and cap/cover with Mill test Certificate.
		2.Surface Defects	MA	Visual Examination	100%	-	MSS-SP-55	MSS-SP-55	Inspection Report	√	P/W	V	V	
		3. Dimensions	MA	Measurement	100%	-	Approved DRG	Approved DRG	Inspection Report	√	P/W	-	-	
1.2	Screen	1.Chemical Properties	MA	Chemical Test	1 per Sheet/ 1 per Batch	-	Approved DRG/ Relevant standard	Approved DRG /Relevant standard	Test Certificate	√	P/W	V	V	
		2. Mesh Size / Perforation Dia	MA	Measurement		-	Approved DRG	Approved DRG	Inspection Report	√	P/W	V	V	
2.0	In-Process machining													
2.1	All Components	1.Dimensions	MA	Measurement	100%	-	Approved DRG	Approved DRG	Inspection Report	√	P/W	-	-	
		2. Surface Defects	MA	Visual	100%	-	MSS-SP-55	MSS-SP-55		√	P/W	V	V	
3.0	Sub-Assembly													
3.1	Cap/Cover	Alignment	MA	Visual examination	100%	-	Manufacturer's standard	Proper Fitting	Log Book	-	P/W	-	-	

BHEL					BIDDER/VENDOR		FOR CUSTOMER REVIEW & APPROVAL			
ENGINEERING			QUALITY		Sign & Date		Doc No:			
	Sign & Date	Name	Checked by:	Sign & Date	Name	Seal		Sign & Date	Name	Seal
Prepared by:	PRANJAL OMAR	Pranjal Omar	Checked by:	Ashish Panigrahi	Ashish Panigrahi			Reviewed by:		
Reviewed by:	SANJAY KUMAR	Sanjay kumar	Reviewed by:	RITESH KUMAR JAISWAL	RK Jaiswal			Approved by:		

	MANUFACTURER/ BIDDER/ SUPPLIER NAME & ADDRESS	STANDARD QUALITY PLAN		SPEC. NO : PE-TS-445-100-M010 REV-00	DATE: 30.11.2021
		CUSTOMER : M/s WBPDCI		QP NO.: PE-QP-445-100-M010 REV-00	DATE: 30.11.2021
		PROJECT: 1X660 MW SAGARDIGHI UNIT-5		PO NO.:	DATE:
		ITEM: Y-TYPE STEAM STRAINER	SYSTEM: POWER PIPING	SECTION: II	SHEET 3 OF 3

NOTE:

- In case of foreign supplier, all test certificates shall be furnished by the supplier, duly witnessed/verified by supplier's TPI.
- The Quantum of check to be witnessed (**W**) is 10% of quantity or Min. 2 Nos. at random by BHEL/Customer & 100 % by Vendor for each type, Size & Rating.
- Following to be noted for packing:
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 - Photographs of the packing to be provided just before dispatch for information of PEM.
- The latest revisions/year of issue of all the standard indicated in the QP shall be referred.
- BHEL reserves the right for conducting repeat test, if required.

LEGENDS:

*Records, identified with "Tick" (✓) shall be essentially included by SUPPLIER in QA documentation.


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N: CUSTOMER

P: perform, W: witness, V: verification as appropriate, D: Documentation

MA: MAJOR, MI: MINOR, CR: CRITICAL

BHEL						BIDDER/VENDOR		FOR CUSTOMER REVIEW & APPROVAL			
ENGINEERING			QUALITY			Sign & Date		Doc No:			
	Sign & Date	Name		Sign & Date	Name	Seal			Sign & Date	Name	Seal
Prepared by:	PRANJAL OMAR ✓ <small>Digitally signed by PRANJAL OMAR DN: cn=PRANJAL OMAR, o=BHEL, ou=PEM</small>	Pranjal Omar	Checked by:	Ashish Panigrahi ✓ <small>Digitally signed by Ashish Panigrahi DN: cn=Ashish Panigrahi, o=BHEL, ou=PEM, email=ashish.panigrahi@bhel.com</small>	Ashish Panigrahi						
Reviewed by:	SANJAY KUMAR ✓ <small>Digitally signed by SANJAY KUMAR DN: cn=SANJAY KUMAR, o=BHEL, ou=PEM, email=sanjay.kumar@bhel.com</small>	Sanjay kumar	Reviewed by:	RITESH KUMAR JAISWAL ✓ <small>Digitally signed by RITESH KUMAR JAISWAL DN: cn=RITESH KUMAR JAISWAL, o=BHEL, ou=PEM, email=ritesh.kumar.jaiswal@bhel.com</small>	RK Jaiswal						

	COMPLIANCE SHEET STEAM TRAPS 1X660 MW SAGARDIGHI UNIT-5	SPECIFICATION NO. PE-TS-445-100-M010	
		SECTION : II	
		REV. NO.: 00	DATE: 23.12.2021
		SHEET 1 OF 1	

I hereby comply/not comply (*) to all the requirements of this technical specification in totality.

*** In case the bidder does not comply to the technical specification, the deviations shall be explicitly listed in the technical deviation sheet of GCC. Deviations listed in technical deviation sheet shall only be considered.**


Name of Bidder / Authorized Representative: - -----

Designation: - -----

Signature: - -----

Company Seal: - -----

Date: - -----

	PRE - QUALIFYING REQUIREMENTS	DOCUMENT NO: PE-TS-445-100-M056
		REVISION NO: 00 DATE: 23.12.2021
		SHEET: 1 of 3

Project: 1X660MW SAGARDIGHI UNIT-5

Package: Steam Traps

CRITERIA FOR EVALUATION (TECHNICAL / FINANCIAL):

1. Technical Pre-Qualifying Requirements:

1.1 The bidder should have designed, in-house manufactured, tested, inspected and supplied traps & strainers (as mentioned below) for use in a power plant or for similar application.

CS/SS/AS thermodynamic steam traps of min. 15NB size (with integral strainer);
CS/SS/AS Inverted bucket/ Ball float of min. 20NB size (with external 'Y' type strainer)

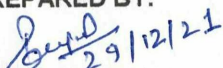

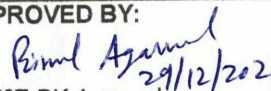
1.2 The item(s) mentioned in point 1.1 should have performed successfully in similar installations for at least one year. To establish meeting this requirement, the bidder shall conform to any one of the following clauses:


- (i) Execution of two purchase orders for different End-users with the item(s) performing successfully for one (1) year from date of commissioning to the date of bid submission as defined in Notice Inviting Tender (NIT) by BHEL. Different projects of a customer shall be considered as different End-users.
- (ii) Minimum one (1) repeat contract from two (2) different Purchasers (i.e. 2 no. of Purchase orders from each purchaser). A contract shall be considered as repeat, when the second contract is given by the same purchaser after lapse of minimum one (1) year from supply completion of first contract.
- (iii) Execution of one (1) purchase order as per sl. no. (i) above from one End-user and one (1) repeat contract from another Purchaser as per sl. no. (ii) above.
- (iv) Three (3) repeat contracts from one (1) Purchaser. Second and third repeat contract shall be after lapse of minimum one (1) & two (2) years respectively from supply completion of first contract.

1.3 The bidder to furnish the following documents, as applicable, in support of the above:

- a) For point 1.2(i): Performance certificates from End-user (duly signed & dated) specifying that the product is performing successfully for one (1) year from date of commissioning along with correlated purchase order(s).
- b) For point 1.2 (ii) & (iv): Purchase Order(s), Material Dispatch Clearance Certificate (MDCC)/ Material Receipt Certificate (MRC)/Lorry Receipt (LR)/ Supply Invoice.

1.4 In addition to above, bidder should have the following for all type/size/material of traps & strainers of BHEL requirement as mentioned in Data Sheet-A of Technical Specification:

PREPARED BY:  NAME: Pranjal Omar DESIGNATION: Dy. Manager DEPT.: PS-PEM/ MPL	REVIEWED BY:  NAME: Sanjay kumar DESIGNATION: Sr. DGM DEPT.: PS-PEM/ MPL	APPROVED BY:  NAME: BK Agarwal DESIGNATION: DH(MPL)
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	PRE - QUALIFYING REQUIREMENTS	DOCUMENT NO: PE-TS-445-100-M056
		REVISION NO: 00 DATE: 23.12.2021
		SHEET: 2 of 3

- a) Capability of designing and manufacturing of the item(s).
- b) In-house testing facilities for carrying out tests as per relevant standards & Quality plan. In case, the in-house testing facilities are not available, then bidder shall furnish undertaking that test(s) will be carried out from govt. approved lab or test house recognized by reputed customers.

Bidder to submit supporting documents (Purchase Order (s)/ Certificate indicating capacity and details/ undertaking of manufacturing & testing facilities) for point (a) & (b) above.

- 1.5 To establish business continuity, bidder is required to submit at least two (2) Purchase orders for any type of traps (thermodynamic/thermostatic/inverted bucket/ball float) and 'Y type- strainer in last 3 (three) years prior to the date of bid submission defined by BHEL-PEM.

2.0 Bidder to also comply with below mentioned general points:

2.1 Offers of the JV companies/ Joint Bidders/ bidders having collaboration/ licensing agreement/ MOU/ Indian subsidiaries shall be evaluated as follows:

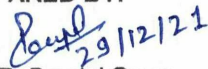
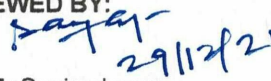
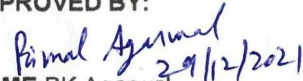
- a) If bidder happens to be an Indian subsidiaries of foreign OEM, then the credentials of the foreign OEM can also be considered for meeting PQR.
- b) If bidder happens to be the Joint Venture Company, then the credentials of any of JV partners can be also considered for meeting PQR.
- c) If bidder happens to be the having valid collaboration agreement/ MOU/ licensing agreement with some other company, then the credentials of collaborator/ MOU partner/ licensing company can also be considered for meeting PQR.


Note: If bidder(s) qualifies on the basis of credentials of his principal/ JV partner/ Collaborator/ joint bidder etc., then the principal/ JV partner/ Collaborator/ MOU partner/ joint bidder shall be responsible for overall design vetting and warranty/ guarantee of the package. The scope matrix clearly defining their respective roles including design vetting, manufacturing of critical component, E&C etc. and warranty/ guarantee shall be submitted along with the offer.

2.2 Bidder to note that the arrangement of bidding (joint bid partners/ collaborator/ MOU partner/ licensing company etc.) once offered to BHEL as a part of bidding documents cannot be changed till the execution of contract(s).



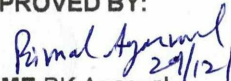
2.3 Consideration of offer shall be subject to customer's approval of bidders, if applicable.

2.4 Bidder to submit all supporting documents in English. If documents submitted by bidder are in language other than English, a self-attested English translated document should also be submitted.

PREPARED BY:  NAME: Pranjal Omar DESIGNATION: Dy. Manager DEPT.: PS-PEM/ MPL	REVIEWED BY:  NAME: Sanjay kumar DESIGNATION: Sr. DGM DEPT.: PS-PEM/ MPL	APPROVED BY:  NAME: BK Agarwal DESIGNATION: DH(MPL)
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	PRE - QUALIFYING REQUIREMENTS	DOCUMENT NO: PE-TS-445-100-M056
		REVISION NO: 00 DATE: 23.12.2021
		SHEET: 3 of 3

<p>2.5 Notwithstanding anything stated above, BHEL reserves the right to assess the capabilities and capacity of the bidder/collaborators to perform the contract, should the circumstances warrant such assessment in the overall interest of BHEL.</p> <p>2.6 After satisfactory fulfillment of all the above criteria/requirement, offer shall be considered for further evaluation as per NIT and all the other items of the tender.</p> <p>2.7 Bidder to ensure that Third Party/customer issued certificates being submitted as proof of PQR qualification should have verifiable details of document/ certificate issuing authority such as name & designation of issuing authority and its organization contact number and email-id etc. In case the same found not available, purchaser has right to reject such document from evaluation.</p>

<p>PREPARED BY:  29/12/21 NAME: Pranjal Omar DESIGNATION: Dy. Manager DEPT.: PS-PEM/ MPL</p>	<p>REVIEWED BY:  29/12/21 NAME: Sanjay kumar DESIGNATION: Sr. DGM DEPT.: PS-PEM/ MPL</p>	<p>APPROVED BY:  29/12/2021 NAME: BK Agarwal DESIGNATION: DH(MPL)</p>
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